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PAPILLARY TUMORS OF THE RECTUM*

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The stimulus to review our experiences with papillary lesions of the rectum stems from Sunderland and Binkley's[1] most thorough review in 1948. Since this date, surprisingly little information has accumulated in the literature concerning these growths though they have long been known and studied in prior years.

DEFINITION OF TERMS

The lesion in question has appeared under a variety of names: papilloma, villous papilloma, papillary polyp or adenoma, columnar or mucous papilloma, and villoma. It is best known by the French, who are particularly interested in this tumor, as "les tumeur villeuses du rectum". Our personal preference is for papillary adenoma—the term used by Sunderland and Binkley—for reasons that it is descriptive in the microscopic pathologic sense, and implies that both glandular formations as well as papillary structures are present within the tumor. Few neoplasms of this type are purely papillary, and those that are purely glandular had best be named adenomatous polyps.

The term papillary adenoma is used only for those lesions which are entirely benign by microscopic standards. The malignant varieties can be further subdivided into those showing merely intramucosal changes characteristic of malignancy, and those showing unequivocal evidence of malignancy characterized by penetration of neoplastic glands through the muscularis mucosa. These may conveniently be termed intramucosal carcinoma (papillary adenoma type) and carcinoma (papillary adenoma type) respectively. The first and third categories present no problem in microscopic diagnosis, but differentiation between the first and second may depend a great deal on personal equation and pathologic criteria. In general, we have used the criteria of malignancy as laid down by Sunderland and Binkley.

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REVIEW OF MORE RECENT LITERATURE

Binkley *et al.*, in 1949,[2] published further experiences with this tumor. They subdivided the lesions into small and large varieties, using 4 cm. as the dividing line. They defined the radical and conservative approach for treatment, the conservative consisting only of local removal and preservation of sphincter control. The radical procedure involved surgical resection with or without continuity of bowel, and the highest salvage rate occurred in patients having procto-sigmoidectomy when no carcinoma was present. This method, however, did not always insure good sphincter control.

In the same year d'Allaines, Dubost and Fournier[3] thoroughly discussed various methods of treating villous tumors. They subdivided the lesion into four categories, viz., non-malignant, malignant, suspected malignant, and recurrent tumors. For the non-malignant growths, local excision through the anal canals was recommended for tumors of moderate size, with a base no more than 3 cm. and located not over 10 cm. above the anal margin. The excision must include a rim or normal mucosa at least 2 cm. around the tumor. This procedure is especially well-adapted in elderly patients and those in poor general condition. Resection of the rectum by a sacral approach was advised for tumors 8-15 cm. above the anal margin where local excision was not feasible, and for lower lesions which were more extensive than described above, as to circumference, height, and size of the base. This procedure is easily withstood in the aged and insures normal continence. The combined abdomino-sacral resection of the rectum was occasionally recommended for large, bulky tumors in the relatively young patient in good physical con-

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dition. Interstitial radiotherapy was likewise curative, but follow-up with this method had not been completely evaluated. It might be useful in the very old patient and in patients who can tolerate no surgery whatsoever. Definitely malignant tumors should be treated as any carcinoma of the rectum, and in general this also holds true for clinically suspicious growths. For very low lesions, these suspicious tumors might be locally excised through the anus, and thoroughly studied microscopically. If found to be benign, nothing further need be done. For recurrent tumors, more radical surgery than previously employed is certainly justifiable, and removal of the rectum by the combined approach is most often necessary.

In 1950, Burns[4] presented nine papillary lesions of the colon and rectum, of which six were in the rectum. He stated that malignant degeneration takes place in 40% of cases, and stressed the high rate of local recurrence. Total local excision of rectal lesions, including normal adjacent tissue about the base, was the treatment of choice if no invasion was present no matter what the cytology revealed. This, of course, would imply prior knowledge of absence or presence of invasion by biopsy at the proper site —a procedure not always possible.

This year also furnished a very thorough and illuminating discussion by Ewing[5] of the subject of villous tumors. The author elaborated on the clinical criteria of malignancy (induration, ulceration and fixation) *versus* the histological criteria (anaplasia, irregularity of architecture and frequency of mitoses) in the absence of invasion. He found clinical criteria more valuable and advised against the more radical procedures solely on the basis of these histologic criteria. For benign uncomplicated lesions, simple local excision was advised, the approach dependent on the site of the tumor. As also advised by d'Allaines *et al.*, Ewing urged removal of a collar of normal mucous membrane surrounding the lesion. If the tumor cannot be removed from below, the abdominal approach should be used, and simple excision or bowel resection utilized. The lesion should be treated like any carcinoma, if it is clinically malignant or biopsy reveals invasion of pedicle. If only intramucosal changes suggestive of malignancy are present, additional biopsies might be justified, but treatment should ultimately be on the conservative side if nothing further can be gleaned from the subsequent biopsy material. The author concludes that there is no clear-cut distinction on pathologic grounds between the adenoma and villous tumor, the former tending to evolve into the latter. The retention of the term villous tumor and its consideration as a separate entity is justified only by convenience to the clinician.

Two years later, Gabriel,[6] in a discussion of large villous tumors of the rectum, stressed the fact that the larger lesions are usually more extensive than a clinical evaluation would lead one to believe. He emphasized the difficulty of excluding a malignant change pre-operatively, and advised examination under anesthesia to better evaluate the tumor for therapy, and to secure more adequate biopsies if these were deemed necessary. This author also thought the radical combined procedure best for larger lesions.

In 1952, Snellman[7] presented five cases of diffuse papillomatosis of the rectum, and considered the lesion definitely pre-cancerous though none displayed the histologic evidence of malignancy. He enumerated the various types of operative procedures which might be used as follows: 1. Abdomino-perineal resection with permanent colostomy. 2. Excision of the rectum followed by a "pull-through" procedure—(this does not insure complete continence). 3. Abdomino-sacral resection of the rectum which gives good sphincter control but may be followed by fistula formation. 4, Abdomino-anal resection which gives good sphincter control if the distal 3 cm. of rectum is spared. Four of the five cases presented had this last procedure, allowing a portion of the rectum readily accessible to future inspection, and possibly local treatment with diathermy should local recurrence supervene.

More recently Ryan[8] and Lucas[9] studied villous tumors below and above the peritoneal reflection respectively. Ryan presented six cases which were apparently benign, and recommended either local excision by pulling the lesion out through the anus, or Beven's procedure incising the posterior sphincter and levater muscles, and thus exposing the rectal ampulla. Lucas discussed five cases also apparently benign. He stated that when malignancy occurs it is slow in appearance and invasion, and remarkably late in metastases. For these higher type lesions, he advised anterior resection and anastomosis when possible, resection and pull through, or resection of sigmoid, rectum and anus.

The following six cases concern our experiences

with tumors of the rectum. Five of these have come under our observation since 1950. This represents the year when special efforts were made to file lesions under the caption of papillary adenoma so that they may be easily found for future reference. An additional case was discovered fortuitously in the files of 1947. Undoubtedly more tumors of this type were observed at this institution but have become lost under the general heading of carcinoma or adenomatous polyp.

Case 1.[a]—V.B.L., a 75-year old white woman, was admitted to the hospital on February 18, 1947, complaining of painless rectal bleeding of three months duration. There was no weight loss, diarrhea or change in bowel habitus, and her general health was good. She had recently consulted a private proctologist who found a lesion on the posterior wall of the rectum. This was biopsied and found to be a malignant tumor. The physical examination and laboratory findings were essentially negative. On the 8th hospital day, the coccyx was resected and local excision of the tumor carried out. The tumor was near the anorectal junction, measured 2 by 1 inches in diameter, and was papillary in type. It was excised with a 3/8 inch margin of normal mucosa. She was last seen by her surgeon July 21, 1954, 7½ years following her surgery. There was no complaint relative to the rectum, and there was no evidence of recurrence.

Pathological findings: Gross: (S-47 788). The specimen consisted of a piece of papillary tumor tissue, 3 cm. in greatest diameter. A portion of coccyx bone was attached to the specimen.

Microscopic: Section showed full thickness rectal wall with a mixed papillary and glandular tumor replacing a major portion of the mucous membrane (Fig. 1). Because of the poor orientation of the specimen, it was difficult to be absolutely certain whether or not invasion into the submucosa was present. Nevertheless, distinctly atypical areas were seen to warrant a diagnosis of malignancy.

Diagnosis: Intramucosal (?) carcinoma (papillary adenoma type) of rectum.

Case 2.[b]—R. L., a 63 year old white man, was admitted to the hospital division of the Medical College of Virginia on November 9, 1950, complaining of a mass protruding from the rectum during defecation. This was first noticed three months prior to admission, and relief was obtained by replacing the mass by digital manipulation. There was slight rectal bleeding. Protrusion followed by replacement recurred several times later. In addition, there was an alteration in bowel habitus during the past two months, associated with an eight pound weight loss and anorexia.

The past history revealed that the patient was

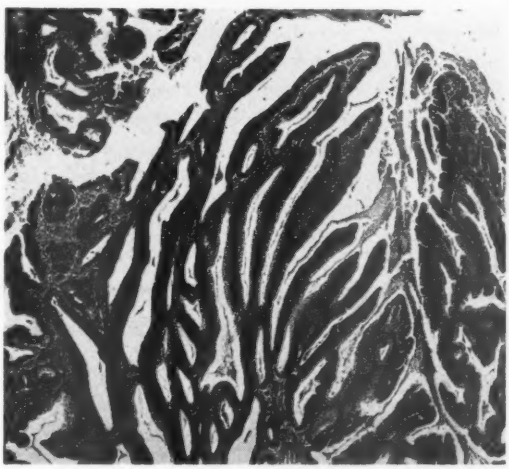

Fig. 1.—Case 1. The papillary features of the neoplasm are shown.

taking digitalis and ammonium chloride for mild cardiac decompensation. He had had hemorrhoids for as long as he could remember.

Physical examination revealed a villous tumor on the posterior wall of the rectum close to the anorectal line. The patient was fibrillating and thought to have arteriosclerotic heart disease.

Laboratory examination showed elevated blood sugar levels consistent with mild diabetes. Other findings were essentially normal.

On the 5th hospital day, the patient was operated upon under low spinal anesthesia. The base of the lesion could be delivered to the anorectal line, and the lesion was locally excised without cutting through the wall of the bowel. The patient was discharged three days later after an uneventful recovery. He was last seen by his physician on March 24, 1953, at which time he was symptom-free, without evidence of recurrence.

Pathologic findings: Gross (S-50 6283) The specimen consisted of a piece of rectal mucosa and submucosa 6.5 by 5 by 2 cm. The mucosa presented many finger-like projections (Fig. 2). There was

a—Courtesy of Dr. Carrington Williams.
b—Courtesy of Dr. C. C. Chewning.

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smooth mucous membrane, however, at one end of the specimen.

Microscopic: The tissue consisted of mucosa and submucosa of the colonic type with only a small portion of underlying smooth muscle in one area. The mucous membrane was replaced almost entirely by a diffuse papillary and glandular neoplasm, which in several places was distinctly malignant. The papillae and glands were lined by tall columnar epithelium containing atypical darkly-staining nuclei, which were often stratified. In the malignant areas the nuclei were bizarre and there was increased mitotic activity up to 4 per high power field. There was no infiltration beneath the muscularis mucosa in any of the sections taken. The tumor very closely approached the margins of the excision in several areas, so that it was unlikely that complete excision had been accomplished.

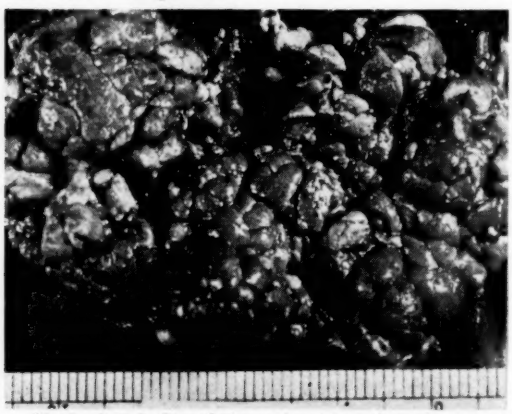

Fig. 2.—Case 2. Gross features of rectal neoplasm showing extensive lobulation and finger-like projections.

Diagnosis: Intramucosal carcinoma (papillary adenoma type) of rectum.

Case 3.[c]—M.M., a 76-year old white woman, was admitted on September 25, 1951, with complaints of rectal bleeding of unknown duration. There was also noted rectal incontinence with passage of liquid feces mixed with blood. Rectal examination revealed poor sphincter tone, and a large polypoid mass, attached by a wide base, two inches above the anal orifice. Following a biopsy of the lesion (see pathology report below) an abdomino-perineal resection was performed on the eighth hospital day. The post-operative course was uneventful and the patient was discharged November 5, 1951, with a satisfactory colostomy. She was last seen by her physician on April 20, 1954, when there was no evidence of recurrence. There was, however, some induration at the posterior fornix.

c—Courtesy of Dr. R. A. Michaux.

Pathologic findings: Gross (biopsy specimen S-51 5664) The specimen consisted of numerous small fragments of soft tissue, the largest 1.5 cm. in diameter. The latter fragment was a round, soft, nodule, reddish-brown and friable. It showed many papillary excrescences on the surface.

Microscopic: Section showed multiple papillae of colonic type mucous membrane, the papillary structures lined generally by normal appearing epithelium with abundant goblet cells. In some instances, however, the epithelium was distinctly atypical, and there were darkly staining, stratified nuclei. In addition, there was noted a large piece of tissue with definitely infiltrating, glandular carcinoma with some papillary formation.

Diagnosis: Carcinoma (papillary adenoma type) of rectum.

Gross: (major specimen S-51 5833) The specimen consisted of two pieces of large intestine previously fixed in formaldehyde, so that considerable distortion of tissue was present. One of the specimens was a terminal segment of colon, including rectum, anum and perianal skin. A polypoid tumor mass was identified about 10.5 cm. above the pectinate line and measuring approximately 7 cm. in the long axis of the bowel. The tumor was soft, freely movable and extended into the lumen for about 8 mm. In its partially fixed state, it had somewhat the appearance of a porcupine (Fig. 3). The other segment of bowel was 13.5 cm. in length and showed merely a small adenomatous polyp, 1 cm. in maxi-

Fig. 3.—Case 3. Typical gross features of villous tumor.

mal diameter.

Microscopic: The lesion in the rectum was a papillary neoplasm composed of long, thin, delicate stalks surmounted by columnar epithelium (Fig. 4). This epithelium was often slightly atypical, with crowding and stratification of nuclei. Nowhere did the lesion infiltrate beneath the muscularis mucosa (Fig. 5) The lymph nodes removed from the mesentery of the sigmoid showed no evidence of metastatic growth.

Diagnosis: Intramucosal carcinoma (papillary adenoma type) of rectum; polyps (adenomatous type) of sigmoid colon.

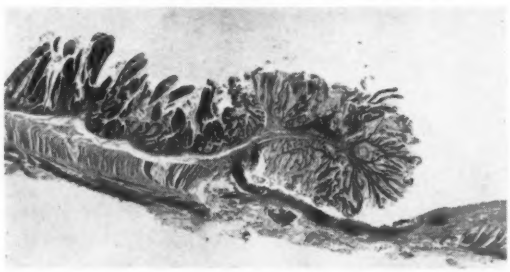

Fig. 4.—Case 3. Low power view to show papillary excrescences without penetration beneath muscularis mucosa.

Case 4.—M.B., a 51 year old white woman, was admitted January 23, 1952, with complaints of rectal bleeding and lumbar pain, present for approximately six months. Physical examination was essentially negative but proctoscopic showed a polypoid, fungating lesion on the anterior and right lateral wall of the rectum, just below the peritoneal reflection. This had been biopsied elsewhere and reported to represent carcinomatous changes in a polyp. X-ray studies showed multiple diverticula of the colon and some narrowing of the rectum with retention above it. Other laboratory findings were non-contributory. The patient was operated upon on the 5th hospital day, when an abdomino-perineal resection was done. On the 20th day after this procedure, the patient was taken to the operating room, and the colostomy dilated. She was discharged on February 28, 1952, to be followed as an outpatient.

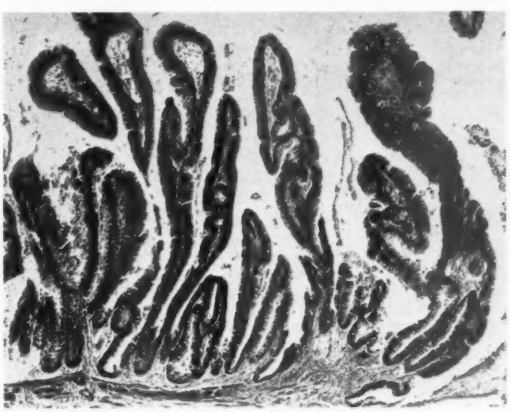

Fig. 5.—Case 3. Higher magnification of Fig. 4.

The patient was readmitted March 15, 1952, because of a watery diarrhea which had developed about 10 days after discharge from the hospital. Physical examination showed a stricture of the colostomy. This was revised two days later, following which she was discharged March 22, 1952, in good condition. She was last seen in the latter part of March, 1954, at which time there was no evidence of recurrence.

Pathologic findings: Gross (S-52 713). The specimen consisted of a 50 cm. piece of colon and an 8 cm. segment of lower rectum, anus and perianal skin. The colon showed numerous small diverticula. The rectum revealed a large polypoid lesion 3 x 1.5 cm. in diameter attached to the mucous membrane by a broad base. The tumor was approximately 2.5 cm. above the pectinate line. The surface of the tumor was smooth, reddish-pink, and cauliflower in appearance. Adjacent to this was a rather flat, verrucous, polypoid mass, 2 cm. in diameter and 5 mm. in thickness. The surface of this was also smooth and reddish-pink. The lesion appeared to be limited to the mucosa and could be freely moved over the underlying muscular wall. About 15 cm. above the pectinate line there was a dense fibrotic mass, 2 x 1 cm., which was adherent to the posterior wall of

Fig. 6.—Case 4. Medium power to show papillary growth without penetration through the muscularis mucosa.

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the upper rectum. The mucosa covering this area was normal.

Microscopic: Section through the rectal polypoid mass showed a papillary adenomatous type of carcinoma which was entirely intramucosal (Fig. 6). The cells comprising the tumor were hyperchromatic, pseudostratified and exhibited active mitoses averaging 3 per high power field. In some areas cell polarity was lost and many atypicalities were present. The dense, fibrotic mass involving the rectal wall was due to endometriosis.

Diagnosis: Intramucosal carcinoma (papillary adenoma type) of rectum.
Endometriosis of rectum.
Diverticula of colon.

Case 5.[d]—L.W., an 81-year old white man, was first seen in the private office July 22, 1952, complaining of a small amount of blood in the stools. Examination revealed a hard fungating mass on the right anterior rectal wall, which was obviously ulcerated, hard and immovable. The lower border of the lesion was 7 cm. from the anal margin and occupied approximately one-third of the circumference of the rectum. The lesion was biopsied and reported as carcinoma (papillary adenoma type (S-52 4910) (Fig. 7.) Because of the patient's

Fig. 7.—Case 5. The papillary nature of the tumor is shown.

advanced age he was advised by another physician, related to the patient, not to undertake an operative procedure. He was seen again May 19, 1954, at which time no real change of the lesion could be ascertained. Another biopsy was taken which revealed typical infiltrating carcinoma without papillary features. There has been no weight loss and the patient leads an active life, working as a farmer.

Case 6.—I.B., a 51 year old white woman, was admitted to the Medical College of Virginia, Hospital Division, March 17, 1954, because of a neoplasm of the rectum, accidentally discovered when she consulted her physician because of general feeling of being unwell. She had complained of intestinal discomfort and gaseous distention during the past 1½ years. There was occasional fresh blood in the stool, ascribed to hemorrhoids. The tumor was confirmed five days prior to admission, by biopsy (see pathological report below). On the third hospital day an abdomino-perineal resection was done. The patient did fairly well following this procedure, but required daily dilatation of the colostomy. She was discharged on April 23, 1954, to be followed as an out patient.

Pathological findings: Gross (biopsy specimen S-54 1811). The specimen consisted of eight small pieces of tissue varying in size from 4 x 3 mm. down to 1 mm. in diameter. These pieces of tissue were pink-tan and friable.

Microscopic: Sections showed a malignant tumor of the colonic variety characterized by long, papillary processes consisting of thin, connective tissue stalks surmounted by atypical columnar epithelium (Fig. 8). There is considerable mitotic activity and the

Fig. 8.—Case 6. Medium power to show papillary and malignant characteristics.

nuclei are stratified and show variations in size and shape.

d—Courtesy of Doctor G. D. Vaughan.

Diagosis: Carcinoma (papillary adenoma type) of rectum.

Gross (major specimen S-54 2113). The specimen consisted of a terminal segment of colon, rectum and anus and another more proximal segment of sigmoid colon. These measured 19 cm. and 11 cm. in length respectively. On the anterior wall of the rectum, and 1.5 cm. superior to the pectinate line, was a friable, papillary tumor, soft in consistency (Fig. 9). The lesion measured 4 cm. in the long axis, 3.5 cm. in the transverse axis and 1.5 cm. in thickness. The tumor was attached to the mucosa

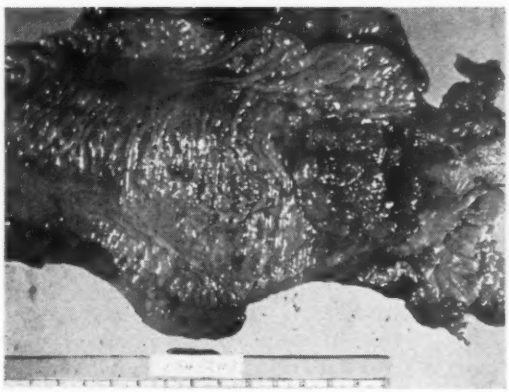

Fig. 9.—Case 6. Gross features of low-lying tumor in the rectum showing lobulated and exophytic characteristics.

but moved freely over the underlying muscular coat. The superior border of the neoplasm extended to a point 6.5 cm. below the peritoneal reflection.

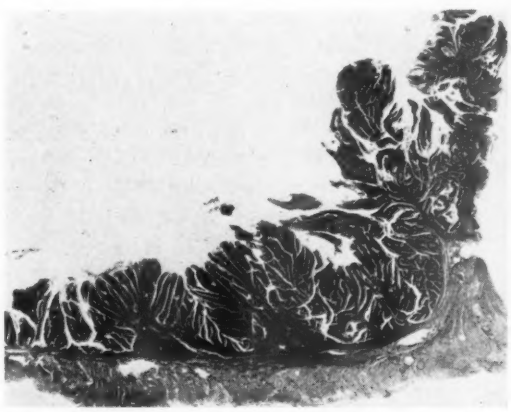

Fig. 10.—Case 6. Low power view of papillary tumor confined to the mucous membrane.

Microscopic: Section showed a papillary and glandular tumor, obviously malignant, but almost entirely confined to the mucous membrane (Fig. 10). The superficial portions of the tumor showed long papillary stalks supporting delicate vascularized stroma (Fig. 11). The epithelial cells were bizarre and the nuclei atypical and variable in size and staining quality (Fig. 12). A small island of neoplastic glands was found in the submucosa in one area—proof of actual invasion by the tumor (Fig. 13).

Diagnosis: Carcinoma (papillary adenoma type) of rectum.

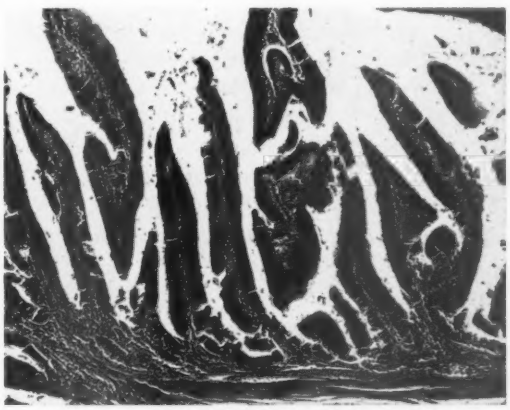

Fig. 11.—Case 6. Medium power view of Fig. 10.

COMMENT

Because of the short follow-up periods on most of these reported cases, nothing but cautious conclusions can be drawn on the ultimate prognosis. Neverthe-

Fig. 12.—Case 6. High power view of Fig. 10 to show malignant features.

less, certain facts seem to come to light, and these will be briefly elucidated.

In keeping with Sunderland and Binkley's analysis,[1] the disease is an affliction of the elderly. All

of our cases occurred over 50 years of age, with extremes from 51 to 81. The impression is also gathered that, regardless of the ultimate outcome, the lesion is slow in its progression. This fact is entirely in keeping with conclusions found in the literature.

It will be noted that all cases were ultimately diagnosed as malignant, intramucosal, or infiltrating. This might be construed as over-diagnosis on the intramucosal lesions, but this seems hardly possible when it is remembered that the diagnosis of infiltrating carcinoma was made on biopsy specimens prior to major surgery when these were done.

Concerning therapy, we believe that once the diagnosis of infiltrating carcinoma is made, an abdominoperineal resection is generally the treatment of choice. One might elect to do an anterior resection with anastomosis below the peritoneal reflection for high-

Fig. 13.—Case 6. Island of neoplastic glands invading submucosa of rectum.

ly-placed small lesions, or pull-through procedures for lesions at least 3 cm. above the anal sphincter. The justification for temporizing is based on the life history of the lesion, as indicated above, and by this reasoning one might choose the lesser procedures also in the very old and poor-risk patients.

Ideally, it would be important to know by preliminary biopsy whether or not one is dealing with an invasive lesion. We agree with Ewing[5] that the subtle changes of intramucosal malignancy are of lesser importance than the clinical criteria, and that only histologic proof of invasiveness can be accepted as an indication for radical surgery. It is indeed unfortunate that the pathologist may be unable to furnish this proof if the biopsy is not taken from the right area. The surggestion of Gabriel,[6] of examining the patient under anesthesia, is a good one to facilitate the removal of tissue from the proper area to include the base. The lower lesions might also be excised locally, as advised by D'Allaines and co-workers,[3] for thorough scrutiny under the microscope prior to final decision.

For lesions entirely confined to the mucous membrane, local excision by any of a number of methods might be safely employed, provided that the tumor is not of too great size to render difficult the removal of a ring of normal mucosa at least 2 cm. beyond the confines of the tumor. One cannot give an arbitrary figure of what this size should be, since so much depends on the location of the lesion, its extent on the circumference of the bowel, and whether or not it is sessile or in part pedunculated. At any rate, local removal demands a most careful follow-up of the patient in order that local recurrence may be picked up as soon as possible.

SUMMARY AND CONCLUSIONS

1. Six cases of papillary tumors of the rectum are presented.
2. The pathology of these growths is reviewed and a means of classification suggested.
3. In general, the papillary tumors can be divided into those that are strictly confined to the mucous membrane, and those that penetrate the muscularis mucosa to invade the deeper structures.
4. The tumors that show the severest anaplastic features histologically are more apt to also show microscopic evidence of invasion.
5. As a group the tumors are slow-growing and late to metastasize.
6. They are found in an older age group than the usual epithelial tumors of the rectum.
7. As a rule, invasive neoplasms should be treated by radical combined procedures, but local excision may be performed for strictly intramucosal growths.

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Aid for Auto Chest Injuries.

A technique has been devised to aid breathing by persons whose chests have been crushed by the steering wheel in auto accidents. Three Chicago physicians reported they have "stabilized" soft chest areas and successfully solved a difficult breathing problem for such patients by the use of weighted traction applied on pins painlessly inserted in the chest.

More cars, higher speeds and "fantastic increases" in horsepower mean that more serious injuries, and a proportionate increase in chest injuries, can be expected. Such injuries now cause 20 to 25 per cent of automobile accident deaths. One of the most pressing problems in the treatment of "stove-in chest" is stabilization of the chest wall. Drs. Theodore R. Hudson, Robert T. McElvenny and Jerome R. Head, of Northwestern University Medical School and Wesley Memorial Hospital, said their technique may help solve this problem. (J.A.M.A., October 23, 1954)

In such chest injuries, the normal movement of the diaphragm and ribs is disrupted when injury-softened chest areas sink in instead of expanding with each breath. This also impairs coughing, which results in flooding of the lungs by secretions which normally would be coughed away. A vicious cycle is set up "as desperately ill patients struggle for increasing amounts of air only to find the situation made worse by their own efforts."

In minor injuries adhesive strapping is satisfactory, but for serious ones existing techniques may not be very effective. They devised a method by which the softened part of the chest is held up and out by traction, with weights suspended from an overhead frame such as that used for some fracture cases. Pins placed in the softened part of the chest wall are held by metal spreaders, or "fingers", fastened to weighted cords. The pins are placed while the patient is under a local anesthetic, and the pull of the weights is painless. The pins cause no harm to the tissues around them and leave only small pinpoint scars.

Five patients have been treated by this method. Two of these patients died of other serious accident injuries, but the technique was successful in aiding their breathing. Two patients recovered completely without after-effects. A fifth patient was successfully treated in this way after the physicians wrote their report.

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DIAGNOSIS AND TREATMENT OF LESIONS ABOUT THE OPTIC CHIASM*

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PITUITARY TUMORS

Pituitary tumors constitute about 10 per cent of all intracranial neoplasms that comes to operation. The commonest tumor or disease process that affects the pituitary gland and requires operation is chromophobe adenoma. This tumor not only produces changes in the roentgenogram of the head and in the perimetric fields but also produces endocrine disturbances, usually of a hypopituitary type. In addition to adenomatous tumors of the pituitary gland, there is a group of congenital tumors of pituitary origin, namely pituitary adamantinomas, which are also known as craniopharyngiomas, hypophyseal duct tumors and Rathke pouch tumors.

Types.—Pituitary tumors may be either hyperfunctioning, such as eosinophilic adenoma and basophilic adenoma, or nonfunctioning, which is true of chromophobe adenoma.

Eosinophilic adenoma characteristically produces the syndrome of acromegaly. In this condition the hands and feet enlarge, the head increases in size, the lower jaw becomes prominent, the teeth tend to become separated, and in the female the body tends to resemble that of the male. Menstruation may or may not cease, and the male may or may not have loss of libido and potentia. The tendency of such a tumor to expand downward and thus grow away from the optic nerves and chiasm accounts for the small number (5 per cent) that produce visual changes and require operation.

Basophilic adenoma which in some cases is responsible for the syndrome of hirsutism, the development of the buffalo type of obesity, hypertension, amenorrhea, and atrophic purplish striae of the skin in the female rarely if ever requires surgical treatment or causes changes in the perimetric fields.

Chromophobe adenoma, on the other hand, tends to destroy the normally functioning pituitary gland and to produce endocrine disturbances characterized by rather waxy pallor, diminution or loss of sexual function and loss of beard, axillary hair and other secondary sex characteristics in the male. In the female there is usually loss of menstruation and ability to conceive. The indication for surgical treatment is pressure on the optic chiasm or optic nerve with resultant visual disturbance. Occasionally a pituitary adenoma will extend above the sella, encroach on the domain of the third ventricle and produce increased intracranial pressure before signs of visual loss occur.

Clinical Characteristics.—Bitemporal visual disturbance or bitemporal hemianopsia is the classic visual disturbance caused by a pituitary tumor. This occurs because the tumor breaks through the diaphragm of the sella, rises anterior to the optic chiasm and between the optic nerves, and displaces the chiasm posteriorly and the optic nerves laterally. Thus, the nasal fibers and the crossing fibers in the chiasm are compressed with the resultant loss of vision to the outer or temporal side of the field of vision.

Although bitemporal hemianopsia is the classic type of field defect, innumerable variations may occur. An homonymous visual defect may be produced when the adenoma breaks out from the sella laterally, below the internal carotid artery, and compresses one optic nerve.

Early in the development of a pituitary tumor the optic disks appear normal. If the pressure is not relieved at this stage the disks become pale, and later they lose substance and vision fails.

Roentgenologic examination of the head is most important when the presence of a pituitary tumor is suspected. In the majority of cases of pituitary adenoma, there is either enlargement of the sella turcica or enlargement and erosion of bone. In a study of 314 surgically verified pituitary adenomas at the Mayo Clinic, Love found that the sella turcica, by roentgen-ray examination, was normal in only 12 cases.

In adamantinoma, in addition to erosion or enlargement of the sella turcica there is often calcification either within the sella turcica or most often above and behind the posterior clinoid processes. In

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a review of 108 cases of craniopharyngioma, Love and Marshall[1] found that calcification was observed in only 50 per cent of the cases.

Electroencephalograms may help in the differential diagnosis of tumors about the optic chiasm, and many neurosurgeons routinely do air encephalograms in suspected cases and feel that they are of diagnostic help. There is some question with regard to the importance of these air studies, especially if there is a differential point as to whether a visual change is being caused by a lesion about the optic chiasm or one involving the optic tracts and optic radiations in the brain.

Treatment.—The surgical approach to a tumor of the pituitary gland is by the trans-sphenoidal or the intracranial route. The trans-sphenoidal operation as carried out by certain surgeons is applicable in the treatment of certain cystic tumors, but unfortunately, the differential diagnosis between cystic and solid tumors is very difficult, with cystic tumors making up no more than 10 to 20 per cent of the total.

The surgical procedure most commonly used is right or left transfrontal craniotomy, the choice depending upon which side predominates in the manifestation of symptoms. The dura can be incised either along the sphenoidal ridge or along the lower edge of the opening into the cranium. By elevating the frontal lobe one can expose the optic chiasm and approach the tumor.

A recent advance that facilitates exposure of the optic chiasm and prevents undue pressure on the frontal lobe is that of spinal-fluid drainage. After the patient is anesthetized a plastic needle is inserted into the subarachnoid space in the lumbar region. Then as soon as the dura is open, 50 to 70 cc. of cerebrospinal fluid are aspirated through the needle. This relieves tension within the cranial cavity and at times make it unnecessary to use any force in retracting the frontal lobe.

In this connection it should be mentioned that thiopental (pentothal) sodium given intravenously is considered an excellent anesthetic agent, although some surgeons prefer ether inhalation or rectal anesthesia. When thiopental sodium is used, an intratracheal tube may be introduced after anesthetization and oxygen given throughout the operation. The use of this anesthetic agent and an intratracheal tube relieves the danger of increased intracranial pressure due to coughing during the operation.

With the chiasm exposed, there is usually evidence of the intrasellar mass, which may vary in color from red to purple. Because of the danger that this mass may be an aneurysm, a sharp needle of small caliber is inserted into it at an angle and aspiration is done. Usually no fluid at all or a brownish fluid can be aspirated. The presence of bright red blood, of course, indicates aneurysm. Should there be no blood or fluid, the capsule of the tumor is incised and the contents removed with suction and scoops. If the tumor proves to be a chromophobe adenoma, the capsule is teased gently from beneath the optic chiasm with forceps and suction and as much of it is removed as possible. After removal of the tumor the aspirated cerebrospinal fluid is replaced, and this brings the frontal lobe back in place. When the dura can be sutured and the wound closed, early ambulation is desirable for all patients who undergo craniotomy, the time and amount of ambulation depending upon the strength and post-operative reaction of the patient.

OPHTHALMOLOGIC DIAGNOSIS OF MENINGIOMA OF THE SPHENOIDAL RIDGE

Meningiomas constitute approximately 15 per cent of all intracranial tumors and it is generally recognized that they occur more commonly in women. It is postulated that some hormonal influence accounts for this difference in sex distribution. Further evidence for hormonal influence is the observation that they may develop during or shortly after pregnancy. Two meningiomas removed during pregnancy by Weyand and co-workers[2] showed microscopic evidence of an unusually foamy cytoplasm, which might have been the result of increase in the intracellular fluid. This could explain an increase in size of the tumor during pregnancy and a decrease after termination of pregnancy.

Although the ocular symptoms are the same regardless of the side on which the meningioma is situated, the general symptoms may differ. Tumors of the left sphenoidal ridge more often are associated with psychosis and other mental changes than are tumors of the right ridge. This probably is explained on the basis of involvement of the dominant hemisphere. For the same reason, removal of a meningioma of the left sphenoidal ridge is likely to prove more dangerous than removal of a lesion on the right side.

In Cushing and Eisenhardt's[3] series of 53 meningio-

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mas of the sphenoidal ridge, the tumor was on the right side in 30 cases and on the left side in 23 cases. Elsberg and co-workers[4] reported 15 cases of proptosis due to intracranial tumors, most of which were meningiomas. In their experience, exophthalmos occurred more frequently on the left side in females and more frequently on the right side in males.

The sphenoidal ridge represents the anatomic dividing line between the anterior and the middle cranial fossae. It consists of the horizontal bony protuberance formed by the lesser and greater wings extending laterally from the anterior clinoid process, fanning out on its lateral extension to join the pterional region of the cranial vault. This bony ridge is in close proximity to the orbit and to the structures entering and leaving the orbit by way of the optic canal and the superior orbital fissure.

Unilateral failure of vision associated with primary atrophy of the optic nerve which often progresses to near blindness before the other eye becomes involved is an outstanding feature of meningioma of the sphenoidal ridge. This may or may not be associated with unilateral proptosis. Contralateral papilledema is a prominent finding. Oculomotor palsies are present in many cases. One of the characteristic syndromes in tumor of the inner part of the ridge is unilateral loss of visual acuity with homolateral optic atrophy and defects in the visual field, whereas tumor of the middle part of the ridge is characterized by lack of ocular signs.

It is often difficult for the neurosurgeon to be certain just where along the sphenoidal ridge the tumor actually arises. This is particularly true if the tumor is large, vascular and associated with much hyperostosis of bone and in so far as there is considerable overlapping of the ocular manifestations of meningiomas involving the various segments of the sphenoidal ridge.

The material that follows is based largely on Kearns and Wagener's[5] report on 106 surgically and pathologically verified meningiomas of the sphenoidal ridge from the files of the Mayo Clinic. In their series the youngest patient was a woman 25 years old while the oldest was a man 64 years of age. The sex ratio showed the usual preponderance of women, there being 76 women and only 30 men. The right side was affected more often than the left, 61 of the tumors being on the right ridge while 45 were on the left ridge. As for ocular symptoms, 73 of the 106 patients had disturbance of the eyes as the only, or a chief, complaint. The complaints consisted of loss of vision, increased prominence of one eye, double vision, pain around one eye and swelling of the lids. The remaining 33 patients complained of headache, convulsions and mental changes. It is interesting to note that of the 33 patients in whom eye symptoms were not noted, 15 had choked disks, 7 had pallor of one or both disks, 3 had pupillary abnormalities and 1 had a significant field defect.

Sixty-three of the patients were found to have loss of vision in one or both eyes which could be attributed to the tumor. Many of the patients were able to date the onset of loss of vision 5 to 10 years prior to the time of examination. Unilateral loss of vision always lateralized the tumor. If both eyes were involved, the tumor was, without exception, on the same side as the eye with the greater loss of vision.

The most frequent type of field defect was that of a prechiasmal lesion of one optic nerve. Nineteen patients were blind in one eye at the time of admission. Sixty had localizing field defects, of which 39 were unilateral, and 21 were bilateral. Of the 21 bilateral defects, 13 were variants of the bitemporal type and 8 were homonymous.

The most common ocular complaint next to visual loss was proptosis, 34 patients making this complaint. The protrusion varied between 2 and 19 mm. in extent and was usually straight forward, or straight forward and downward. It was nonreducible and in most cases it was not associated with pain.

Two mechanisms are responsible for the production of proptosis in meningioma of the sphenoidal ridge. The tumor may extend into the orbit in a dumbbell fashion and thus produce the exophthalmos of an orbital tumor, or it may cause hyperostosis of bone in the walls of the orbit without actual extension into the orbit and thus produce exophthalmos.

In 46 cases there were choked disks; the choking was bilateral in 31 and unilateral in 15. The papilledema varied from mild edema of one disk margin with only slight elevation, to 6 diopters of elevation of each nerve head. The intracranial lesion was homolateral with the papilledema in 10 of the 15 patients who had unilateral choking of the disk. It was contralateral in 5 patients, representing examples of the Foster Kennedy syndrome, since all

5 of these patients also had pallor of the homolateral disk.

Forty-two of the patients had pallor of one or both disks. In 34, the pallor was unilateral and on the same side as the tumor. The 8 patients with bilateral pallor of the disks all had chiasmal types of field defects, indicating that the tumor had spread toward the midline to involve the optic chiasm and the contralateral optic nerve. Pallor of the disks may be secondary to previous papilledema attributable to secondary optic atrophy. However, pallor of primary optic atrophy is more commonly found in patients with this type of tumor.

Meningioma of the sphenoidal ridge would seem to be a very rare cause of isolated dilatation and sluggishness of the pupil.

Only 15 of the 106 patients in the Kearns and Wagener series were noted to have definite weakness of extraocular muscles. In 8 of these the limitations of rotation were not due to involvement of the cranial nerves, but were secondary to proptosis and hence were due rather to the abnormal position of the eye. Among the 7 patients with paresis actually due to involvement of cranial nerves, there were 4 patients with involvement of the sixth nerve, 1 with involvement of the third nerve, 1 with involvement of the third and sixth nerves, and 1 with involvement of the third and fourth nerves.

Roentgenograms of the heads of all patients should be made as a part of the routine investigation. Although the tumor itself is not visualized, the presence of calcification in the tumor or the associated osteomatous thickening of adjacent bone leads to a diagnosis in many cases.

Kearns and Wagener, on the basis of their series of cases, postulated the usual and more typical findings in a composite hypothetical case. In the presence of a tumor of the sphenoidal ridge, such a patient (1) is more likely to be a woman in her forties or fifties, (2) will have noticed gradual protrusion of the right eye over a number of years, (3) will have had loss of vision over a long period either preceding, following or coinciding with the proptosis, (4) will have no history of pain although there may be headaches, (5) will have pallor of the disk, (6) will have a field defect suggesting a prechiasmal lesion, (7) may have choked disks and (8) will present, on roentgenographic examination of the head, a diffuse osteomatous thickening in the greater and lesser wings of the sphenoid.

CRANIOPHARYNGIOMA

Craniopharyngiomas constitute a small but important group of intracranial tumors. They comprise approximately 4 per cent of all intracranial neoplasms and about 30 per cent of all pituitary tumors. They have been called by a variety of names, such as hypophyseal duct tumor, craniopharyngeal duct tumor, Rathke pouch tumor, craniobuccal cyst, suprasellar cyst, epithelioma, interpeduncular cyst, simple squamous epithelioma and adamantinoma.

Clinical Features.—Craniopharyngioma is common in childhood, but is by no means confined to this age period. In a review of 100 cases of craniopharyngioma verified surgically or at necropsy at the Mayo Clinic, Love and Marshall reported the following distribution of patients according to age: 0 to 10 years, 19 cases; 10 to 20 years, 34 cases; 20 to 30, 12 cases; 30 to 40 years, 15 cases; 40 to 50 years, 11 cases; 50 to 60 years, 8 cases; and more than 60 years, 1 case. The youngest patient was 3 years old and the oldest was 67. In about half of this series of 56 males and 44 females the duration of symptoms was a matter of months, averaging 5 months. In the remaining cases, the duration of symptoms was a matter of years, varying from 1 to 31 years and averaging 4 years.

Craniopharyngiomas produce a multitude of symptoms of greatest variety. The principal causes of such symptoms are disturbances of pituitary function, pressure involvement of the optic nerves and chiasm, hypothalamic dysfunction and hydrocephalus. The symptoms of increased intracranial pressure—that is, headache and vomiting—were the most frequent primary presenting complaints in Love and Marshall's series. Progressive dimness of vision was the most common mode of onset of the disease. Objectively, central vision was found to be reduced in both eyes in 73 cases and in one eye in 8 cases.

The ocular findings in cases of craniopharyngioma are far from uniform, not only because of the variation in size and location of the tumor, but also because of the varied relational anatomy of the optic pathways. In the series just mentioned, the optic disks were normal in 15 cases, and there were papilledema in 28 cases, pallor of the disks in 30 cases, and simple optic atrophy in 21 cases. In the cases in which the disks were normal the duration of loss of vision averaged 6 months, while in those cases in which the disks were choked the duration of loss of

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vision averaged 5 months. It is difficult to generalize as to the relationship of the tumor to the condition of the disks. For the most part, it might be said that in patients with choked disks the tumor most commonly was situated behind the chiasm, and in those with simple optic atrophy the tumor was in front of the chiasm.

Defects in the visual fields were asymmetric, whether bitemporal or homonymous. Bitemporal defects in the visual fields occurred most commonly, being present in 41 cases. Homonymous defects were present in 23 cases, unilateral temporal defects in 6, bilateral central defects in 4, concentric contractions in 2, and blindness in 4. The visual fields were normal in 8 cases, and in 12 instances data as to examinations of the visual fields either were unobtainable or had not been recorded.

Craniopharyngiomas produce roentgenologic changes which are characteristic of both intrasellar and extrasellar tumors. Extrasellar changes indicative of increased intracranial pressure were observed in 23 cases of the series under consideration. The outline of the sella turcica was abnormal in 63 cases. Changes in the sella turcica indicative of an extrasellar tumor, such as widening and flattening of the sella, foreshortening or erosion of the posterior clinoid processes from above, or widening of the outlet were found in 34 cases. Evidence of an intrasellar lesion was found in 29 cases.

Craniopharyngiomas have a tendency to calcify, as was seen in microscopic study of this series, in which 77 per cent of the tumors contained calcification. Roentgenologically, however, calcification was observed in only 56 per cent of the cases.

Endocrine disturbances occurred in 55 of the cases of this series; in only 32 of these was the patient less than 20 years old. Hypopituitarism was noted in 32 of the cases and in 8 of these the symptoms of both hypothalamic involvement and pituitary dysfunction were found. Depression of sexual function occurred in 23 cases; it was the most common feature of endocrine disturbance. Changes in hair and skin, such as absence or scantiness of axillary and pubic hair, were noted in 16 cases. In 12 cases stunted skeletal development was observed; in 2 of these the condition was described as being dwarfism. Loss of weight and emaciation were prominent signs in 12 cases. Adiposogenital, syndrome, diabetes, insipidus, hypersomnia and episodes of stupor were also indications of hypothalamic involvement. Psychiatric changes which could be attributed to hypothalamic involvement were noted in 4 cases.

When there is a history of headache, loss of vision and endocrine changes, the diagnosis of craniopharyngioma must be considered; if the symptoms occur in a person less than 20 years old and are associated with calcification in or above the sella turcica, the diagnosis is unequivocal. In the presence of an adenoma the sella turcica usually is symmetrically enlarged. Meningioma of the tuberculum sellae usually occurs in patients beyond middle age, and there is gradual development of bitemporal hemianopsia without other symptoms.

Gliomas of the optic chiasm produce rapid loss of vision. Roentgenologic examination often shows an enlarged optic foramen.

Treatment.—The treatment of craniopharyngioma is unquestionably surgical and requires good exposure of the optic chiasm. For that reason, transfrontal craniotomy is the usual operative approach to tumors of the pituitary body. While it is customary to explore on the side on which there is the greatest compression of the optic chiasm, right craniotomy is to be performed when diminution of vision is equal bilaterally.

A great deal depends upon the anesthetic agent used. Nitrous oxide and ether may be administered by intratracheal tube, although the intravenous use of thiopental (pentothal) sodium, with nitrous oxide and oxygen administered by intratracheal tube, has proved more satisfactory in the majority of cases. Patients prefer thiopental sodium to ether, and in my experience this agent causes less tendency toward tightness of the brain than does other anesthetic agents. An added pre-operative measure consists of spinal-fluid drainage as described in the section on pituitary tumors.

Total removal of the craniopharyngioma is possible in only a small percentage of cases. In the Mayo Clinic series of 100 cases, 96 patients underwent operation; in only 15 of the 96, the tumor could be totally removed. Aspiration of the contents of the capsule and resection of the tumor and capsule were done in 71 operations; in 10 of these the resection was extensive. Intracapsular enucleation or aspiration and curettement were done in 12 cases, and in 4 cases aspiration alone was done. On 1 occasion it was necessary to transect the optic chiasm to get better exposure. The patient had bitemporal hemianopsia pre-operatively. In 5 cases the anterior com-

municating artery, after application of clips, was cut in order to secure better exposure. No loss of cerebral function was noted as a result of this procedure. In 4 cases the floor of the third ventricle was opened intentionally in an effort to relieve the internal hydrocephalus.

A review of the statistics indicates that after subtotal removal of this type of tumor there was definite evidence of recurrence; at intervals, varying from 2 months to 10½ years, operations for recurrence were carried out 11 times on 11 patients in the series. Roentgen irradiation was used both before and after operation with questionable results, although a number of patients apparently received a great deal of relief following irradiation.

Of the 96 patients who underwent surgical treatment, 38 died in the hospital, giving a hospital mortality rate of 40 per cent. Of the 58 patients who survived operation, 14 were operated on in 1944, or later. Of the remaining 44 patients, 3 were untraced or had not been followed for 5 years. Of the 41 traced patients, 21, or 51 per cent, lived 5 or more years after leaving the hospital. Five of these patients survived 10 years or longer. Two were living 13 years and 1 was living 20 years after operation. At the time of this study, 17 patients were known to be living a year or more after operation; of this group, 13 were carrying on some type of useful activity.

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Aid to Cancer Diagnosis.

A rotating brush for painless early diagnosis of cancer in the throat has been developed by a Miami, Fla., physician. Dr. J. Ernest Ayre, of the Miami Cancer Institute, described the new instrument in the October 23 Journal of the American Medical Association. He said the brush could be used to collect cells for use in laboratory tests of visible growths in the throat. The diagnosis of cancer of the voice organ now depends on surgical removal of cells.

"The need for a screening method for early cancer of the throat has been emphasized by recent publicity on the importance of ruling out malignancy in heavy smokers suffering from throat irritation. It is suggested that a simple technique such as that described here may play a useful role in annual cancer examinations and in examination of patients suffering prolonged hoarseness or throat irritation."

The instrument has a retractable brush and is curved to fit the throat. The bristles sweep rapidly in full circle and collect a rich concentration of cells. The procedure is so rapid that irritation is brief and no anesthetic is needed.

The most common type of maligancy in the throat is cancer of the outer layers of skin. Patients may suffer chronic hoarseness, cough and bleeding; chronically inflamed, reddened patches on the vocal cords that appear innocent may be early cancer. These persons should be observed closely, and the new instrument will help early diagnosis.

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SPECIFIC DRUG THERAPY IN THE TREATMENT OF PULMONARY TUBERCULOSIS

A Note on the Management of Drug Reactions

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Streptomycin and PAS (para-aminosalicylic acid) have been in clinical use for several years and Isoniazid for roughly the past two years. A tremendous amount of information is available concerning the proper selection of drugs, the optimum dosage regimen, the duration of therapy, and the integration of drug therapy with the over-all management of the disease. It has been established that the probable drug therapy of choice consists of streptomycin sulfate, 1 gm. twice weekly, combined with PAS, 12 gms. daily; or if PAS cannot be used, Isoniazid, 5 mg. per kilogram of body weight per day. More recently, Isoniazid combined with PAS has been shown to be of real value. If possible, only one "major" drug, meaning streptomycin or Isoniazid, should be used at a time[1].

The literature records many instances of streptomycin, PAS, and to a much less extent Isoniazid drug reactions, common and uncommon, serious and inconsequential. The purpose of this report is not to review the subject of drug reactions comprehensively but to consider the management of certain common drug reactions. This seems particularly pertinent at this time, since the practitioner is being called upon more frequently to manage the tuberculosis patient at sometime during treatment.

Drug reactions are of three general types: reactions associated with fever (the allergic or hypersensitive type), serious reactions which may not be associated with fever, and minor toxic reactions.

DRUG REACTIONS ASSOCIATED WITH FEVER (ALLERGIC TYPE)

The precipitous onset of fever with considerable variation in associated headache, malaise, chills, sweating, generalized aching, arthralgia, anorexia, and occasionally vomiting, is the usual clinical picture. Although not the ordinary thing, erythematous, mascular, papular, and vesicular rashes may occur; the most common of these is probably hives. At the time of the reaction, it is difficult to know which drug is at fault. In retrospect, the relation of the reaction to the time streptomycin was given or the lack of such a relationship might suggest that either streptomycin or PAS respectively was at fault. The wisest plan is to stop all the drugs in question and await the complete disappearance of the reaction. This usually occurs within 24 to 36 hours in the absence of dermatitis.

One very important diagnostic point is that febrile reactions almost invariably occur within four to six weeks of the date the drugs were started. Febrile episodes after this time are rarely due to the drugs in question.

Exacerbation of tuberculous disease is occasionally associated with febrile drug reactions, and this may confuse the clinical picture particularly if desensitization is in progress.

The white blood count is commonly elevated. Eosinophilia is noted occasionally. Leukopenia, when present, is more often associated with PAS reactions.

The principles underlying the management of the common febrile drug reaction are well known and simple: (1) withhold the suspected drugs until the reaction has subsided, (2) use small test doses of each drug in question (streptomycin, PAS, and Isoniazid) to identify the offending drug or drugs; and then (3) employ an appropriate desensitization program for the offending drug or drugs, or exclude the same from future drug therapy.

Streptomycin. A test dose of streptomycin sulfate (assuming this was the type of streptomycin in use) 0.25 gm. (intramuscularly) is given and followed by 0.5 gm. if no reaction occurs. If the 0.5 gm. dose is tolerated, it is quite certain that streptomycin sulfate is not the cause of the reaction, and it can be safely resumed in the usual dosage.

If a reaction does occur to streptomycin sulfate, as evidenced by fever, etc., test doses of dihydrostreptomycin are given exactly as described for streptomycin sulfate. If no reaction occurs, dihydrostreptomycin, 1 gm. twice weekly is given temporarily during desensitization to streptomycin sulfate. In this way there is no interruption of drug therapy.

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It is extremely rare that a reaction from dihydrostreptomycin occurs, even though a severe reaction may have occurred from streptomycin sulfate. Desensitization to streptomycin sulfate or dihydrostreptomycin (the rare case) can be accomplished quite successfully.

An initial dose of 0.01 gm. (intramuscularly) is given and, if no reaction occurs, the dose is increased by 0.01 gm. daily until 0.1 gm. is given. The dose may then be increased by 0.05 gm. daily until 0.5 gm. is given. The usual dose of streptomycin sulfate can be resumed and dihydrostreptomycin discontinued. The dose of dihydrostreptomycin should be reduced to 0.5 gm. twice weekly when 0.2 gm. is reached in the desensitization program to streptomycin sulfate.

PAS. If no reaction occurs to the test dose of streptomycin sulfate, it is obvious that the reaction was due to PAS (assuming PAS was combined with streptomycin sulfate). A test dose of 2 gm. is suitable in most instances. Desensitization to PAS can be done, usually with success, or Isoniazid can be substituted, whichever seems preferable.

An initial dose of 0.125 gm. of PAS is given and increased by 0.125 gm. daily until 1.0 gm. is given. The dose is then increased by 0.5 gm. daily until 4.0 gms. is given; and then the dose is increased by 2.0 gms. daily until the full dosage is resumed.

Isoniazid. Test doses of 10 mg. or 25 mg. are usually adequate. Reactions to Isoniazid are rare. Desensitization is usually successful. A solution is best used in the desensitization process.

An initial dose of 0.1 mg. is given and this is increased by 0.1 mg. until 1.0 mg. is given. The dose can then be increased by 1.0 mg. daily until 5.0 mg. is given. Increments of 5.0 mg. in the dose are given daily until 25.0 mg. is tolerated; and subsequently increases of 25.0 mg. are given daily until the full dose is resumed.

It must be borne in mind that drug reactions of this kind are occasionally the result of sensitivity to more than one drug, and the most common instance of this is a reaction to both streptomycin and PAS.

Needless to say, any untoward reaction may call for a revision of the desensitization program. This consists of reducing the initial dose until tolerated, increasing the dose by smaller increments and more slowly. Occasionally, desensitization can be accomplished more quickly than indicated above.

A word of caution is appropriate with respect to severe drug reactions of this type which vary substantially from the common type described. Drug reactions associated with progressive papular or vesicular dermatitis, hepatitis with jaundice, marked leukopenia, and combinations of the above are often unpredictable in their course. Desensitization should be undertaken with the greatest caution; and, better still, the offending drug should be avoided. In the more frightening of these reactions, one must carefully consider whether drug therapy is absolutely necessary. It is well known that sensitivity to streptomycin and PAS decreases markedly with the passage of time; and it may be that drug therapy should be withheld at least temporarily, until it is clear that it is needed, at which time one may be surprised to find that the previously offending drugs are tolerated.

SEVERE DRUG REACTIONS WHICH MAY BE UNASSOCIATED WITH FEVER

Severe tinnitus and vertigo or evidence of progressive nerve deafness as a result of the use of streptomycin are not often met with using the dose 1.0 gm. twice weekly but were fairly common using 1.0 gm. daily. Using the streptomycin dosage, 1.0 gm. twice weekly, this type of reaction is not commonly seen in less than four to six months following the date the drugs were started. Deafness is far more serious and is usually caused by dihydrostreptomycin. *This is the basis for the belief that dihydrostreptomycin, even in doses of 1.0 gm. twice weekly, should not be used for more than three or four months.* The streptomycin preparation causing either severe tinnitus and vertigo or deafness should be discontinued. Isoniazid combined with PAS is then the drug therapy of choice.

Progressive papular or vesicular dermatitis is occasionally seen even though fever may be absent or inconspicuous. Exfoliative dermatitis is a real danger. Dermatitis of any kind is most often seen within a few weeks of starting the drugs, but it may be delayed, rarely, for months. The same caution expressed in connection with febrile drug reactions associated with dermatitis, hepatitis, and leukopenia apply equally here. Desensitization to the offending drug is frequently unsuccessful and sometimes dangerous; and, consequently, it is best avoided in future drug therapy.

Severe and progressive peripheral neuritis result-

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ing from the use of Isoniazid is cause enough to discontinue this drug. An incapacitating syndrome may ensue with its continued use. The situation is more commonly seen in patients in a poor nutritional state.

The use of Isoniazid in patients prone to psychotic and convulsive disorders should be avoided.

MINOR TOXIC REACTIONS

Varying degrees and different combinations of malaise, fatigue, headache, myalgia and arthralgia, mild tinnitus, difficulty in visual accommodation and burning of the eyes, circumoral paresthesias, nervousness and irritability are commonly associated with the use of streptomycin sulfate and to a less extent with dihydrostreptomycin and Distrycin (Squibb) (equal parts of streptomycin sulfate and dihydrostreptomycin). If streptomycin sulfate is being used, one might consider the temporary use of Distrycin (six to eight months) or dihydrostreptomycin (three or four months). Symptomatic therapy is quite effective. Dramamine (Searle) is sometimes of value in controlling mild vertigo.

Mild anorexia, epigastric distress, flatulence, and occasionally diarrhea are often associated with the use of PAS. Temporary discontinuance of the drug, temporary reduction in dosage (3.0 gms. t.i.d.), and the taking of PAS with meals and with plenty of milk or other liquids are often effective in controlling the symptoms. Management of upper GI symptoms and diarrhea need no special mention.

Isoniazid is almost always well tolerated. Rarely, nervousness and insomnia are associated with its use, and symptomatic therapy is quite effective.

Such minor toxic symptoms are rarely severe enough to warrant discontinuing the drug in question, even though the patient may be inconvenienced from time to time. As stated, minor modifications in the use of the drugs with the addition of symptomatic therapy will usually suffice.

SUMMARY AND CONCLUSIONS

The management of the common drug reactions resulting from the use of streptomycin, PAS (para-aminosalicylic acid), and Isoniazid has been outlined. Methods of desensitization to the various drugs have been suggested.

Drug therapy should not be discontinued indefinitely simply because the patient has had a drug reaction; and the same would apply to unnecessarily accepting a less desirable drug regimen. Desensitization is a successful means of avoiding both discontinuance of drug therapy and using a less desirable drug or combination of drugs.

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Medical Literature Needed.

A letter has recently been received from Dr. T. K. Thomas, Hon. Medical Superintendent of St. George's Mission Hospital, Punalar, P. O., Travancore, S. India, in which he asks that members of The Medical Society of Virginia send him their used medical journals with all available back copies, medical books, reprints of articles. Dr. Thomas states that his hospital is a non-profit organization situated in a hilly village and working among the poor labor classes. "As good medical literatures are very few in this part of the world, a small library was started recently, attached to the above Hospital. . . . Further Ayurvedic and Unani systems of medicine are very troublesome competitors to allopathic system here and proper equipment and medical literature are highly essential for the successful management of the Hospital."

TREATMENT OF GENERALIZED CRYPTOCOCCOSIS WITH 2-HYDROXYSTILBAMIDINE—

Report of A Case with Apparent Cure*

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With the successful therapy of many of the bacterial infections by antibiotic agents, the problem of treatment of diseases of mycotic etiology has become more prominent. We have recently had under our care a patient with the generalized form of infection by Cryptococcus neoformans (Torula histolytica) and, encouraged by her apparent cure by 2-hydroxystilbamidine, we are reporting the case. No attempt to review the literature concerning either the disease or the therapeutic agent will be made.

Cryptococcosis (Torulosis) is a subacute or chronic, highly fatal infection caused by C. neoformans which may affect the skin, lungs, or other tissues of the body, but which has a marked predilection for the brain and meninges[1]. The disease is called "blastomycosis" in the European literature and must not be confused with North American blastomycosis, or Gilchrist's disease caused by Blastomyces dermatitidis or South American blastomycosis caused by Blastomyces brasiliensis. It occurs in all parts of this country and in scattered areas throughout the world. Clinically, localized and generalized forms have been described. Localized forms include meningeal, pulmonary, cutaneous, and osseous infections and there may be combinations of these. The central nervous system is most frequently involved, the lungs occasionally, and other organs seldom[1]. Rarely, there occurs a generalized type of the disease in which the lymph nodes, kidneys, liver, and spleen are predominantly invaded by the fungus and a clinical picture resembling Hodgkin's disease is presented[2]. Indeed, cryptococcosis has been described in association with Hodgkin's disease, though there seems to be no etiologic relationship between the two[3]. Our patient's course seems to represent that of the generalized form of cryptococcosis.

CASE REPORT

S. R., a 16 year old married, colored female, was admitted to Norfolk General Hospital on August 5, 1953, with the chief complaints of pain in the neck and loss of appetite. Her past history was non-contributory. She was born in Norfolk, Virginia, and, until shortly before the present illness, had spent all her life in that city. She married at the age of 15 and had never been pregnant. Her mother, father, and husband were reported as healthy. An uncle had died of tuberculosis in May, 1952, but she had had very little contact with him. In May, 1953, the patient visited relatives in Philadelphia, Pennsylvania. About a month later, she lost her appetite, became nauseated after eating and developed generalized aching and malaise. Then she noted a small painful lump in the right side of the neck and found that she was running a daily temperature elevation of 100° F. She consulted a physician in July, and, after he was unable to make a diagnosis and advised hospitalization, she returned to Norfolk. The system review was otherwise negative. Physical examination on admission to the Norfolk General Hospital revealed a pale, colored girl who weighed 117 pounds compared with her usual weight of 130 pounds. The temperature was 99° F, pulse 80, and blood pressure 130/60. The neck was not stiff. The eyes, ears, nose, and throat revealed no abnormality. There was no rash on the skin. There was a tender nodule the size of a marble just below the isthmus of the thyroid. A tender, slightly smaller nodule was felt just above the medial end of the right clavicle. Similar tender nodules were felt in each axilla and groin. The breast were normal. The heart and lungs showed no abnormality. The abdomen was flat and soft. The tender edge of the liver was palpable two finger breadths below the costal margin. The tip of the spleen was palpable one finger below the costal margin and it, too, was tender. Examination of the extremities and nervous system revealed no abnormalities. The pelvic and rectal examinations were within normal limits. On August 5, urinalysis of a catheterized specimen showed a specific gravity of 1.015, sugar negative, albumin one plus, red blood cells 10 to 15 and white

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*Read at the early Spring 1954 meeting of the Virginia Section of the American College of Physicians.

blood cells 6 to 8 per high power field. Hemoglobin was 9.4 grams, red blood cell count 3,100,000, white blood cell count 11,800 with a differential count of polymorphonuclear neutrophiles 63%, eosinophiles 15%, lymphocytes 22%. The corrected sedimentation rate was 35 mm./hour, the hematocrit was 31 vol.%, the platelets numbered 362,700 per cubic mm. The bleeding and clotting times were normal. The fasting blood sugar was 107 mgms.%, NPN 20 mgm.%, uric acid 2.3 mgm.%, total protein 6.0 grams %, albumin 3.7 grams %, globulin 2.3 grams %, cholesterol 173 mgm.%, icterus index 6, thymol turbidity 6, cephalin flocculation 2+. The Mazzini serologic test for syphilis was negative. Urine culture showed E. coli. Blood culture on broth and Sabouraud's medium was sterile. There was no significant elevation of serum agglutinin titers against proteus, typhoid, paratyphoid, or brucella, or of heterophile agglutinins. Several blood counts and urinalysis revealed the same findings except that the thymol turbidity subsequently rose to 10, and the white blood cell count to 19,200. Tuberculin test with P.P.D. was negative in the first dilution strength and positive in the second. X-ray examination of the chest was within normal limits. From the time of admission, the patient ran a septic type of fever with a daily spike often reaching as high as 103° F. The tentative diagnosis was Hodgkin's disease. On August 7, biopsy of lymph nodes in the right supraclavicular region was performed by Dr. Eugene Lowenberg. The specimen consisted of an encapsulated ovoid mass 12 x 7 x 7 mm. having the appearance of a lymph node and accompanied by two smaller nodes. On section they were homogenous and white. Microscopically, the lymph node architecture was completely destroyed and replaced by granulomatous tissue (Fig. 1). This consisted of large numbers of multinucleated giant cells of the Langhans type. Between the cells were closely packed plasma cells with a few polymorphonuclear leucocytes and eosinophiles. Within the giant cells were numerous yeast-like organisms measuring 10 to 15 micra in diameter which were surrounded by broad capsules (Fig. 2). These organisms stained brilliant pink with the periodic acid-Schiff technique. Culture of the node on blood agar at 37° C. yielded small, round, pearly, yeast-like colonies. On Sabouraud's agar at room temperature, the organisms grew out as moist, slimy, cream-colored colonies. Smears from both preparations showed thick walled, ovoid, single-budding, yeast-like organisms measuring 10 to 15 micra in diameter which stained positively with Gram's stain. No mycelia were formed after culture on corn meal agar at room temperature for over four weeks. The organism was identified as Cryptococcus neoformans. The identity was confirmed by Dr. Albert Kligman of the University of Pennsylvania, and Dr. Norman Conant of Duke University.

On August 14, the patient was given 2-hydroxystilbamidine, 75 mgms. in 200 cc. of 5% glucose by slow intravenous drip. The following day 150 mgms. of 2-hydroxystilbamidine were administered in a similar manner, and, on August 16, 225 mgms. of the drug were given. This latter dosage was administered daily for 17 days. Beginning with the third day of therapy, the febrile spikes appeared to become progressively lower. On the eighth day, however, they rose abruptly almost to their previous levels. On the fourteenth day of therapy, the temperature returned to normal and remained so until the day of discharge, September 5, 1953. During the interval of treatment with 2-hydroxystilbamidine, the patient experienced marked subjective improvement and, on discharge, her liver, spleen, and lymph nodes were no longer tender or palpable. Physical examinations of the patient on December 15, 1953, and on January 30, 1954, revealed no evidence of disease except for an acute coryza on the latter date. Her weight was 130 pounds. Urinalysis was normal. Hemoglobin was 13.3 grams, red blood cell count 4,380,000, white blood cell count 11,150 and the differential count normal except for an eosinophilia of 4%. The sedimentation rate was 27 mm./hour, icterus index 9, cephalin flocculation 3+, thymol turbidity 8, total protein 6.3 grams %, albumin 4.3 grams %, globulin 2.0 grams %, NPN 30 mgm.%. An X-ray examination of the chest was considered to be within normal limits.

COMMENT

The treatment of cryptococcosis heretofore has been highly unsatisfactory and the disease has almost invariably been fatal.

In 1945, Elson[4] reported that certain of the diamidines were effective *in vitro* against Blastomyces dermatitidis. These observations led Schoenbach and his colleagues[5] to use stilbamidine and propamidine in four cases of systemic blastomycosis. Beneficial results were obtained in three patients and encouraging results in a fourth. Good results were also ob-

tained in an additional case reported by Pariser and his colleagues.[6] Stilbamidine has previously been used by Snapper[7] in the therapy of multiple myeloma and by Sen Gupta[8] in kala-azar, and its administration found complicated by several toxic reactions.

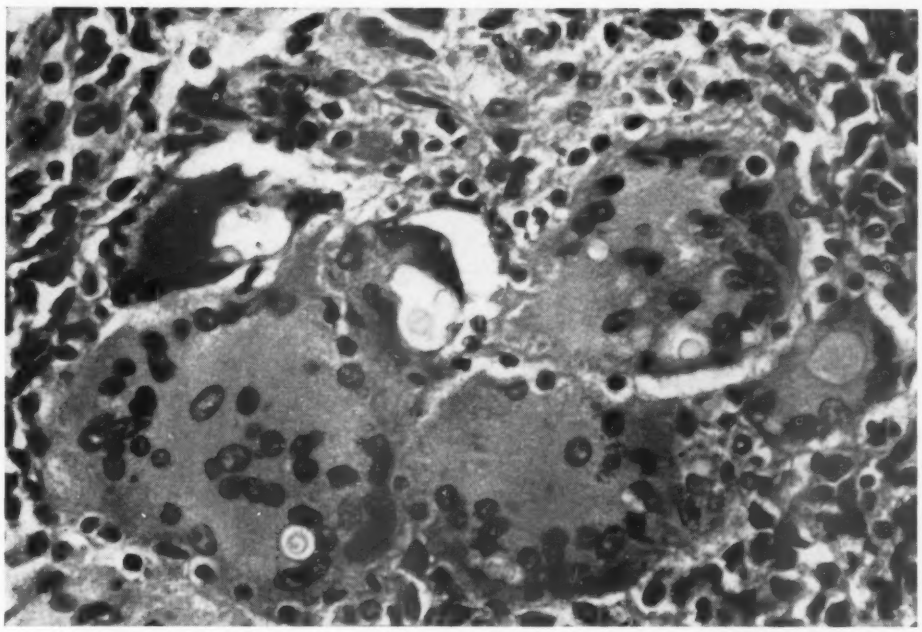

Fig. 1. Lymph node: Multinucleated giant cells contain C. neoformans. The node structure has been replaced by granulomatous tissue. H. & E. stain X500.

Solutions of stilbamidine are very sensitive to light and this reduces its therapeutic effectiveness and increases its toxicity. In animals, it may cause fatty changes in the liver and degeneration of the convoluted tubules of the kidney. In addition, in humans it has an affinity for the peripheral nervous system, producing a neuropathy which usually involves the trigeminal nerve and which may not appear until three or four months after the drug has been discontinued. In 1948, Snapper[9] reported that 2-hydroxystilbamidine did not produce trigeminal neuropathy and that solutions of it were more stable and less toxic than those of stilbamidine. In 1953, Snapper and McVay[10] reported the successful treatment of four cases of North American blastomycosis with 2-hydroxystilbamidine without evidence of any toxic reactions. With this background, our attention was directed to 2-hydroxystilbamidine as a possible effective therapeutic agent for cryptococcosis. In our patient, 4.05 grams of the drug were administered over a period of 19 days with apparent cure.

SUMMARY

A 16 year old girl with generalized cryptococcosis (torulosis) was treated with 4.05 grams of 2-hydroxystilbamidine given over a 19 days period with apparent cure.

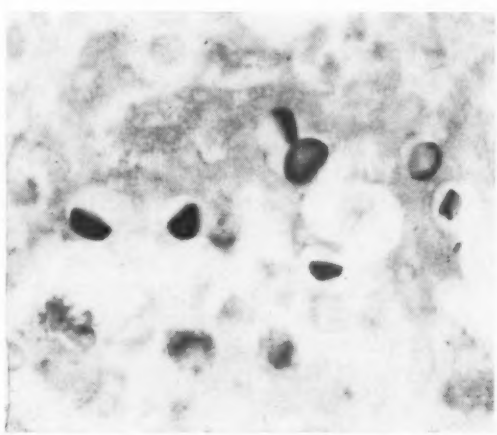

Fig. 2. Lymph node: Detail of C. neoformans. P.A.S. stain X1000.

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Polio Patients Must Work.

Heroic efforts to save lives during summer polio epidemics are difficult to justify unless the paralyzed patient's independence and pride are restored after he goes home. Dr. John F. Marchand said the polio patient may lose muscle power but not mental power and personality. He does not "vegetate" unless neglected. He can find an "appropriate vocation and awakening interest" if helped promptly. Practical requirements for restoring polio victims to "an acceptable way of life" are "easily overlooked after a summer epidemic passes and community interest dwindles."

There are now 1,000 or more young adults and children, "the residue of recent epidemics" in iron lungs in scattered emergency care areas, Dr. Marchand said in the August 7th Journal of the American Medical Association. "A comprehensive national recovery program for [polio] patients is now as urgently needed as the excellent one in effect for the benefit of the blind: a practical schedule directed toward a restoration of confidence and dignity modeled after the achievements of Helen Keller, who set the precedent of an active career although blind, deaf and speechless.

Persons handicapped in one way "perform admirably in others" if only given the chance, he said. Communities must plan not only for emergency life saving during the polio season but for long-term personality saving later. Survivors of epidemics should be transferred promptly to large regional centers and new "sheltered workshops" where they can learn constructive work and make occasional visits home. More important than the patient's need to go home immediately after recovery is his need for a chance "to discover himself not as a burden or family liability but as a modest social and economic asset." In addition, the patient who goes home too soon may be in danger of sudden death or delayed muscle breakdown. Convalescence, or a decline, continues for years and constructive treatment during this time is "a medical undertaking not at all less urgent than the original lifesaving effort."

"The pervasive undercurrent of defeatism prevalent in much present planning for hospital or home care bypasses real potentialities for recovery." "Although the death rate has been cut in some areas, care of post-acute poliomyelitis has been relatively neglected. An underestimation of community care requirements or improvised planning for the acute and convalescent stage of poliomyelitis can be costly and ineffective."

Medical services with new equipment and "a new standard for special education" can raise the polio survivor from "total vegetative dependency to that of a student and finally to that of a young person who need not wait, fancifully, for a full return to physical normality before he can rediscover his dignity and initiative as a productive person."

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PERIARTERITIS NODOSA ACCOMPANIED BY SARCOID-LIKE HISTOPATHOLOGICAL CHANGES*

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Periarteritis nodosa, or polyangitis, may present a bizarre clinical picture simulating an almost unlimited variety of diseases. The clinical picture is produced by vascular lesions, and the effect of these vascular lesions on the blood supply of the various tissues, structures and organs of the body. It is the purpose of this report to review a case of periarteritis nodosa which demonstrated sarcoid-like lesions on microscopic examination, and to discuss this case briefly in the light of recent studies in this field.

CASE REPORT

C.J.W., a 23 year old colored male, was admitted on the Dermatology Service of the University of Virginia Hospital on March 26, 1953, with a chief complaint of leg pain and ulcerations of the skin of the lower legs.

Past Medical History: The patient had a febrile illness thought to be compatible with rheumatic fever in 1948. This subsided after several months. He was then in apparent good health until June, 1952, at which time he had a second similar illness. During the second episode he improved with bedrest and salicylates, but, after having been in bed for a period of two months, had what appeared to be thrombophlebitis of the left leg. He was treated elsewhere with cortisone in low dosage, and aureomycin, for several weeks, followed by sulfadiazine for a period of several months. In January, 1953, after ambulation was begun, the patient noted swelling of the legs on dependency, as well as leg pain and ulcerations of the skin of the legs. A large ulcer appeared on the middle one-third of the lateral surface of the left lower leg, accompanied by two smaller ulcerations on the right lower leg. Two months prior to admission to the University Hospital, the leg pain, which was more severe at night, became a prominent feature of his illness.

Physical Examination: At the time of admission on March 26, 1953, the patient had an ulcer 4 cm. in diameter, which was on the lateral middle third of the left leg and a slightly smaller ulcer on the medial aspect of the middle third of the right leg. There was a small, circumscribed area of superficial ulceration on the lower third of the right leg near the medial malleolus. There was a moderate degree of induration surrounding the areas of ulceration, and there was moderate edema of both lower extremities.

The dental status was poor and he had both caries and unextracted roots. He had a brick-red tongue with normal papillae. The blood pressure was 120/80 and the pulse varied from 90 to 100 per minute. P_2 was more than A_2 and there was a Grade II pulmonic systolic murmur. Physical examination was otherwise normal.

Laboratory Studies done during the Course of the Hospitalization gave the following results:

Skin test with old tuberculin (1:1000) was positive at 48 hours.

Liver function tests, including icterus index, Hanger's flocculation, thymol turbidity, bromsulfalein and prothrombin time were normal. Glucose tolerance test was normal.

Routine urinalysis on repeated occasions and PSP test showed no renal abnormality.

The hemogram was normal upon admission with the exception of a 17% eosinophilia. The sedimentation rate ranged from 23 to 33 mm. per hour on five different occasions. Sickle cell test was negative, bone marrow examination was normal and peripheral blood preparations for lupus erythematosus cells were negative. All other blood chemistry and serological tests were normal. Stool examination was normal. Spinal fluid examination was normal. Electrocardiogram was within normal limits. Roentgenographs of the hands, feet and chest revealed no pathology.

At the time the patient was first hospitalized, his peripheral total eosinophile count was about 1800 per c. mm. This showed a marked drop after the subsequent institution of cortisone therapy. Electrophoretic studies of the plasma proteins were done and these showed a slight to moderate decrease in the percentage of serum albumin and a moderate to marked increase in the percentage of gamma globulin present. These determinations were repeated several times during the course of his hospitalization and there was noted a tendency toward the normalization of the plasma proteins in conjunction with the cortisone therapy subsequently administered.

Histopathological Studies: The first biopsy specimen, taken from an area of induration on the left posterior calf before cortisone treatment was begun, showed changes of both periarteritis and sarcoid. Vessels at the lower border of the corium and in the upper subcutaneous tissue showed a variety of changes, including necrosis of the intima and media and a chronic inflammatory infiltrate tending to be perivascular in localization. In some vessels there was granulation tissue replacing the vessel walls as well as intimal proliferation and partial obliteration of the vessels. In addition, epithelioid cells were present in the perivascular areas. Giant cells resembling foreign body giant cells were also present in these areas. Isolated islands of epithelioid cells containing giant cells, but exhibiting no caseation necrosis, were also seen. There was a diffuse, mild, chronic inflammatory infiltrate throughout the dermis. Stains for acid-fast organisms and deep fungi were negative. A second biopsy was taken immediately adjacent to the site of the first biopsy, after

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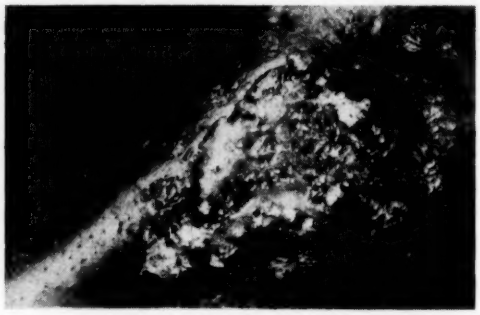
three weeks of treatment with cortisone. Elements of all the changes mentioned above persisted. However, all of these changes appeared to be considerably attenuated except in those vessels which had undergone actual obliteration.

Treatment: Treatment during the course of hospitalization consisted of bedrest, parenteral penicillin and streptomycin and multivitamins in therapeutic dosage. Topical management of the ulcers consisted of 1:4000 potassium permanganate wet soaks, calamine liniment containing Bacitracin, zinc peroxide paste and antibiotic ointments. After one week without obvious improvement in the leg ulcerations or general status, systemic antibiotic therapy was discontinued. Topical dermatological treatment cleaned up the ulcers nicely, but there was no apparent decrease in the induration surrounding the ulcers and no evidence of healing.



A.—A photograph of the ulcer of the left leg taken shortly after admission to the hospital.

B.—Microscopic section No. 1, showing changes of periarteritis nodosa and sareoid-like changes.

Three weeks after admission, cortisone therapy was started. This therapy produced subjective improvement in the form of decreased leg pain, and the ulcers began to heal. The induration surrounding the ulcer sites decreased. At the time of discharge from the hospital the leg ulcers were healed and leg pain was absent.

Subsequent Course: The patient has been seen at irregular intervals during the year since his discharge from the hospital. While taking 100 to 150 mg. cortisone daily he has remained free from leg pain, afebrile, and able to work up to ten hours a day. When cortisone is withdrawn he tends to relapse. The patient traumatized his legs several times during his work and chronic ulcerations developed in the lower one-third of both legs at the sites of trauma. Dependent ankle edema has also been present frequently.

DISCUSSION

The etiology of periarteritis nodosa is unknown. It is generally believed to be a hypersensitivity phenomenon and has been reported in conjunction with rheumatic fever and rheumatic heart disease on numerous occasions. The most frequently involved vascular supply is that of the kidneys, heart, liver and stomach, intestines, mesentery, musculature and pancreas.

The clinical manifestations of periarteritis nodosa are protean and include: polymyositis, polyneuritis and gastrointestinal disturbances. A nephritic syndrome is also frequently seen and hypertension is commonly present. Weakness, weight loss, sweating, low grade fever, prostration, anemia and moderate leucocytosis are not infrequent. Skin manifestations may occur in the form of urticaria-like eruptions, edema, subcutaneous nodules, simple erythema, petechiae, or necrotic ulcerations. Periarteritis nodosa should be considered in the differential diagnosis of chronic ulcers of the lower legs when the etiology is otherwise unknown.

The laboratory findings in periarteritis nodosa are not specific for the disease[1]. However, a moderate to marked eosinophilia is often present in the peripheral blood. Recent work[2] indicates that electrophoretic analysis of the plasma proteins may show a lowered percentage of albumin and an elevated percentage of gamma globulin in a more or less characteristic pattern.

Because of the previous high mortality, the patho-

logical changes studied in periarteritis nodosa have been those of relatively short duration. With the general availability of ACTH and cortisone, periarteritis nodosa will probably be seen more frequently as a chronic disease, and its late stages may be more thoroughly studied. It has been recently suggested that perhaps both sarcoidosis and periarteritis nodosa should be considered as hypersensitivity granulomas[3] for the following reasons: both diseases involve nearly any body system or organ, both respond to ACTH or cortisone, both produce similar alterations of the plasma proteins, and at times both present similar granulomatous histopathological changes. Features of both periarteritis nodosa and sarcoid were present in the case described here.

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New Books.

The following are among the books recently received at the Tompkins-McCaw Library of the Medical College of Virginia. They are available to our readers under usual library rules.

Allen—The skin.
Annual review of microbiology.
Blair—Biological effects of external radiation.
Brimley and Barrett—Practical chromatography.
Brown—Neck dissections.
Burch—Digital plethysmography.
Carlson and Johnson—The machinery of the body.
Catton—A stillness at Appomattox
Chusid and McDonald—Correlative neuroanatomy and functional neurology.
Ciba Foundation—Mammalian germ cells.
Ciba Foundation—Preservation and transplantation of tissues.
Ciba Foundation—The spinal cord.
Clemmessen, editor—Cancer of the lungs.
Courville—Commotio cerebri.
Fabricant, editor—Why we became doctors.
Field—Patients are people.
Fleming and D'Alonzo, editors—Modern occupational medicine.
Floyd—Symposium on fatigue.
Gillilan—Clinical aspects of the autonomic nervous system.
Gray—Anatomy of the human body.
Greenberg—Clinical pathways of metabolism.
Gurd, editor—Chemical specificity in biological interactions.
Hackett—Cliff's edge.
Harrison—Principles of internal medicine.
Hill—Practical fluid therapy in pediatrics.
Kocher and Dearstyne—Shadows in silver.
Lindberg—Chemistry and physiology of mitochondria and microsomes.
Livingston—Diagnosis and treatment of convulsive disorders in children.
Major—History of medicine.
National Academy of Sciences—Annotated bibliography of analytical methods for pesticides.
Neel and Shull—Human heredity.
Organic analysis.
Recent progress in hormone research.
Russell—The scourge of the swastika.
Schroeder—Hypertensive diseases.
Shirley—The child, his parents and the physician.
Simmons—Social science in medicine.
Snell and Snell—Colorimetric methods of analysis.
Stewart—Stewart's scientific dictionary.
Symposium on the laboratory propagation and detection of the agent of hepatitis.
Weeks—Autobiography of John E. Weeks.
Welch, editor—Manual of antibiotics.
Yater—Fundamentals of internal medicine.
Yearbook of general surgery.
Yearbook of pediatrics.

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PHYSICAL MEDICINE FOR THE GENERAL PRACTITIONER

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and
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Richmond, Virginia

The specialty of Physical Medicine and Rehabilitation has developed largely within the last two decades. Because of an origin stemming from many disciplines, much information offering therapeutic and diagnostic aid to the family physician lies buried in the literary productions of medical journals of limited circulation and has not yet found its way into those textbooks most readily available as references. It is with the hope of stimulating general interest in the therapeutic approach of the physiatrist that this article is presented. This is the first of a planned series of articles detailing the general scope of this field of medical practice.

The primary objective of the general practitioner from a physiatrist's viewpoint is what has been called "preventive rehabilitation"[1] or "disability control"[2]. This might be simply defined as locking the barn door *before* the horse is stolen. This concept, as will be illustrated, is for the practitioner best embodied in the treatment of the hemiplegic and of the arthritic.

The function of muscle and joints is movement. Normal joints left at rest soon develop synovial adhesions which rapidly result in permanent fixation. Muscles unused atrophy and eventually undergo fibrosis. Too frequently in the course of a prolonged illness these facts are overlooked. A seriously ill patient is allowed to assume and maintain contorted bed positions which may become permanent. Even prolonged sitting in a wheelchair may produce irremediable hip and knee flexion contractures which make walking impossible. The disability arising from such acquired deformities may be greater than the original disease. While this most often occurs in the elderly and in those who already have joint disease, even children are not immune. Simple attention to physiological bed positioning and the use of a bed exercise routine which carries each joint through its normal range of motion several times a day will effectively prevent this type of catastrophe. The exercises may be carried out passively if the patient is too weak or debilitated to participate but should preferably be active voluntary motion. Instructing the patient to keep his extremities moving will not acomplish the objective. Unsupervised movement is incomplete and ineffectual. The exercise routine can most successfully be carried out by a trained physical therapist but, if necessary, a member of the family can be taught to supervise an adequate program.

The decubitus ulcer, too, is best treated by anticipation. Its prevention is facilitated by meticulous attention to hygienic measures and the use of a firm supporting surface with no irregularities to produce local areas of pressure. The patient must be turned from the prone to the supine position at intervals of one to two hours. A Stryker frame makes this procedure effortless and is more effective than the air or oscillating mattresses in common use. If decubitus ulcers do develop, twice daily immersion in the Hubbard tank rapidly cleanses the involved areas and permits earlier skin-grafting.

The concept of preventive rehabilitation is vital in the treatment[3] of the hemiplegic patient. Cerebrovascular disease is ever on the increase. As the average age of the population continues to rise, the general physician will be called on more and more to treat the residuals of the cerebrovascular accident. The physical treatment should begin as soon as possible after the acute accident, preferably within 72 hours, and should only be delayed by shock, severe debility or high fever. Anatomical evaluation of the upper extremity will demonstrate that flexor, adductor and internal rotator muscle groups are the strongest. If allowed to follow a "natural" course, a hemiplegic upper extremity becomes frozen in a position of adduction and internal rotation at the shoulder, flexion and pronation at the elbow and flexion at the wrist and fingers. Such an extremity is functionally useless when voluntary control is later re-established. Similarly, in the lower extremity the tendency is to develop external rotation of the thigh and a drop-foot deformity with shortening of the Achilles' tendon which, when ambulation

becomes feasible, results in the classical circumduction gait. The initial approach to this problem is by bed positioning. The arm is abducted at the shoulder (position may be maintained by a pillow in the axilla) flexed 90° at the elbow with the wrist and fingers maintained in neutral position by an extension splint, removable for exercise. The leg is positioned in neutral position (neither internally nor externally rotated) with sandbags and the foot kept flexed at 90° against a foot board to which it may be fastened with a loose webbing strap. Twice daily all involved joints are carried passively through the entire available range of motion. Muscle re-education of the involved muscle groups is begun to re-establish voluntary control. As soon as this is achieved, a program of muscle strengthening exercises for extensor, abductor, external rotator muscle groups in the upper extremity and for the extensors of the knee and dorsiflexors of the foot is begun. When strength and endurance are adequate, attempts to achieve the erect posture are begun by the use of tilt boards and similar devices which allow for gradual changes in position as tolerated. Eventually ambulation, first in parallel bars, then with crutches or canes is achieved until finally independent walking becomes feasible. Some patients are left with a drop-foot deformity which must be corrected by a short leg drop-foot brace in order that a safe sure gait be possible. The retraining of speech in the aphasic and the achievement of fine motor skills in the affected hand are based on skilled techniques available in institutional departments of speech and occupational therapy and will not be discussed here. One factor frequently overlooked is that recovery from hemiplegia may be hindered both by the visual defect associated with homonymous hemianopsia and by the frontal lobe syndrome associated with extensive damage to that area of the brain.

The rheumatic joint diseases constitute a large segment of the chronic problems of the practitioner. The medicinal approach to therapy with gold salts, salicylates, Butazolidin (phenylbutazone) and the cortical steroids has been well documented in the literature and need not be further discussed here. Physical medicine[4] is an important addition to the treatment regimen. It is effective for the relief of pain, the mobilization of joints, and the prevention of deformity. The use of local heat to reduce pain is as old as medicine itself. Technological advances in the present era have enabled us to measure accurately the effectiveness of the various heating methods. Local use of wet heat in the form of hot packs, hot soaks, and contrast baths produces heating of tissue only to a depth of 1 to 5 millimeters. However, there are other beneficial effects produced reflexly. These include relaxation of muscle spasm adjacent to involved joints, local and eventually general vasodilatation and secondary changes in tissue metabolism. More effective heating can be achieved by the use of general body heating in hot tub baths, Hubbard tanks or moist air cabinets. Infra red lamps are scarcely more effective than hot packs but short wave and microtherm diathermy will produce heating in depth up to several centimeters. For small areas such as the hand, repeated immersion in a paraffin bath at 120° to 125° F. gives effective heating. Total body heating by fever therapy (either with typhoid vaccine or the inductotherm cabinet) requires extensive nursing supervision and is seldom indicated. A recent addition to physical methods is the use of ultrasonic energy to produce deep heating of tissues. This technique is dangerous in unskilled hands and is mentioned only to complete the list. While heat does relieve pain, its use in acutely inflamed joints may be harmful, tending to increase synovial exudation and muscle spasm. Prolonged heating beyond 30 to 45 minutes at one time results in secondary vasospasm, accumulation of tissue metabolites, increasing pain and muscle spasm. However, as a rule, heat may safely be applied for short periods several times daily.

After local heating has been applied, stroking massage can be utilized in the region of the joint. This has a two-fold purpose, to move surplus fluids centripetally via lymphatic and venous channels and to cause relaxation of muscle spasm. If sufficient relief of pain and spasm is achieved by these methods, they are followed by an active (voluntary) exercise program to maintain the available range of motion at the affected joints. In subacute or chronic arthritis the patient is placed on an arthritic exercise routine as a measure for disability control. This routine requires all joints to be moved through their maximum range of motion several times (10 to 15 repetitions) twice daily. This will, even in chronic rheumatoid arthritis, prevent the development of fixed deformed joints. In osteoarthritis of

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the knees highly effective therapy consists of progressive resistance exercises with weights to increase the strength and bulk of the quadriceps muscle and the available joint motion at the knee. Molded splints are frequently used for immoblization of acutely inflamed joints. While it is true that rest of the part diminishes pain, unless the splint is removed daily and the part allowed some movement, the immobilization may become permanent.

These are only some of the facets in the specialty of Physical Medicine and Rehabilitation which touch the daily work of the general practitioner. Others include the treatment of postural back strain, the neuromuscular diseases and the residuals of non-surgical trauma. These factors will be discussed in a subsequent paper.

CONCLUSIONS

A general principle becoming ever clearer in all phases of medicine is that more can be gained by mobilization than by immoblization. This principle is exemplified in the early ambulation of the post-surgical patient and the currently popular arm-chair treatment of myocardial infarction. It is equally true in the treatment of the hemiplegic and the arthritic. A rational, easily applicable physical treatment program for these so commonly met disorders has been outlined. Adherence to the principle of early, effective mobilization will restore many of these patients to useful, active lives and will prevent needless suffering and disability.

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Women May Travel While Pregnant.

Traveling during pregnancy is not likely to be harmful if mixed with "a large dose of common sense."

An editorial in the September 25th Journal of the American Medical Association said a study of 500 pregnant women at Robins Air Force Base Hospital showed 413, or 82.6 per cent, traveled during pregnancy. The total distance was 817,961 miles, or an average of 1,980 miles a person. Most of it was in the second three months of pregnancy and was largely by automobile. Only a few of the women suffered ill effects.

Travel by present-day means is harmless if care is taken. For example, pregnant women about to begin an automobile trip should plan the itinerary well in advance in order to avoid unnecessary inconvenience. Nourishing meals, short walks, and plenty of rest on the trip are advisable. Medication against air or seasickness should be taken along on plane or boat trips. Long bus or train trips should be arranged to include stop-overs. And the possibility of trouble in finding competent medical help during the trip always should be considered.

MEDICO-LEGAL NOTES

Malpractice Liability of Hospital House Staff Physicians in Virginia

The problem of whether or not a physician serving as a house staff officer in a hospital is liable for malpractice is brought into acute focus due to the frequent economic inability of this group of physicians to provide malpractice insurance for themselves. This is particularly true since the recent rise in malpractice insurance rates.

Persons concerned with the problem of house staff officer liability for malpractice have been unable to find a statue in the Code of Virginia directly in point and have been unable to locate a court case specifically stating this liability or absence of this liability. Some of these persons have, therefore, erroneously assumed that there is no law governing the problem.

Negligence, which is the basis for an action for malpractice, was scarcely recognized as a separate tort, or civil wrong, before the earlier part of the nineteenth century. Prior to that time, the word had been used in a very general sense to describe the breach of any legal obligation, or to designate a mental element, usually one of inadvertence or indifference, entering into the commission of other torts. Some writers have maintained that negligence is merely one way of committing any particular tort, just as some courts, for example, still speak occasionally of a "negligent battery". However, for nearly a century, negligence has received more or less general recognition as an independent basis of liability, with distinct features of its own, differing on the one hand the intentional tort, and on the other hand from those actions for injuries for which liability is imposed regardless of fault.

About the year 1825, negligence emerged out of other forms of legal action and began to be recognized as a separate basis of tort liability. One of the earliest appearances of what we now know as negligence was in the liability of those who professed to be competent in certain "public" callings. An inn keeper, a blacksmith, or a surgeon was regarded as holding himself out to the public as one in whom confidence might be reposed, and hence as assuming an obligation to give proper service, for the breach of which, by any negligent conduct, he might be liable.

Contributed by: Charles W. Whitmore, M.D., L.L.B., 214 Langhorne Rd., Lynchburg, Virginia.

An unavoidable accident is an unintended occurrence which could not have been prevented by the exercise of reasonable care. In general, under modern common law there is no tort liability for the unavoidable accident.

Negligence is conduct falling below the standard established by law for protection of others against unreasonable risk of harm. The elements necessary to a cause of action based on negligence are:

(a) A legal duty to conform to a standard of conduct, which protects others against unreasonable risks

(b) A failure to conform to the standard

(c) A reasonably close causal connection between the negligent conduct and a resulting injury

(d) Actual loss or damage

Changing social conditions lead constantly to the recognition of new duties. Perhaps no better general statement can be made than that the courts will find a duty where, in general, reasonable men would recognize it, and agree that it exists.

One who injures another by an affirmative negligent act may be held liable. For an omission to act, there is no liability unless there is some definite relation between the parties which is regarded as imposing a duty to act. When one enters upon an affirmative course of conduct affecting the interest of another, he may be regarded as assuming a duty to act, and thereafter be regarded as liable for negligent acts or omissions.

Professional men in general, and those who undertake any work requiring special skill, are required not only to exercise reasonable care in what they do, but also to possess a minimum of special knowledge and ability. Most of the decided cases have dealt with physicians, but the same undoubtedly is true of attorneys, engineers, accountants, and many other professions. In the absence of a contract to cure, a physician does not insure the results of his treatment and is not liable for an honest mistake of judgment. By undertaking to render medical services, even though gratuitously, he is ordinarily understood to hold himself out as having the knowledge and skill commonly possessed by other members of the medical profession under similar circumstances.

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He is entitled to be judged according to the standards of the school of medical thought which he professes to follow, and by those standards common to the community in which he is practicing. If he represents himself as having greater skill than this, or less, and the patient consents to treatment with that understanding, the standard to which he is held will be modified accordingly.

Modern licensing statutes have been interpreted as establishing a minimum standard of knowledge and skill for the entire medical profession, for lack of which anyone who practices medicine will be held liable.

It is thus clear that the general rules of the common law create for the physician or surgeon, who is duly licensed to practice, a legal duty to conform to the standards of conduct created for him for the protection of others against unreasonable risks. Where the physician fails to conform to these standards of conduct and there is a reasonably close causal connection between his failure to conform to this standard and an injury resulting in loss or damage to the interest of another, the physician or surgeon is liable for his negligent action in a suit termed malpractice.

The only question that arises with regard to hospital house staff physicians is whether or not their special status as employees of a hospital relieves them of the general liability for malpractice which the common law imposes upon all physicians. There is no case or statutory law in Virginia to indicate that physicians who are house staff officers are relieved of this common law liability.

Physicians who are employed by a corporation or by a hospital are usually in the status of independent contractors in relation to their employer. However, a hospital house staff physician, particularly one involved in an accredited training program, has in all probability, a legal relationship of servant or agent in relation to senior staff members, under many circumstances. Where such a relationship can be shown to exist the senior staff member may acquire vicarious liability for the acts of the interns or resident physician. Most senior staff members carry malpractice insurance which recognizes the servant status of house staff physicians, under certain circumstances.

It is often assumed that the house staff physician is economically immune to suit because of pauperism. This is frequently not the case.

The question of whether or not a hospital should provide malpractice insurance for its house staff members, as part of the cost of doing business, is a decision which must be made by each hospital. It is not within the scope of this article to answer the question as to whether or not the state, or an agency of the state, may expend tax funds for the satisfaction of private liability of house staff physicians, or provide insurance for their private risks from the same funds. This question, of course, does not arise with regard to a private hospital.

An alternative solution to the problem is that statutory law be enacted to limit the common law liability of house staff physicians for malpractice, in recognition of their special status. However, some other group of individuals would, in all probability, have to assume the liability as it is unlikely that the legislature would be willing to leave a damaged patient with no remedy.

AMEF Nears One Million Mark.

Several large contributions from state medical associations have boosted the American Medical Education Foundation nearer to its goal of two million dollars in 1954. The California Medical Association recently contributed $100,000. Another large contribution came from the Arizona Medical Association in the amount of $7,230, which represents a $10 per member dues increase voted for AMEF by the association. Both Arizona and Utah have followed Illinois physicians by voting a dues increase as a method of increasing contributions from their states.

Since January 1, 1953, the Foundation has received a total of $968,000 and expected to reach the one million mark in September.

PUBLIC HEALTH

MACK I. SHANHOLTZ, M.D.
State Health Commissioner of Virginia

Immunization of Infants

Immunization procedures should be instigated early to protect against certain diseases. Studies in recent years show that most infants during the first few months of life can develop antibody levels sufficient for protection through the administration of antigens of diphtheria, pertussis and tetanus. Although the levels are not as high as those which are reached through the same stimulation given at a later age, they are, in most cases, adequate. It has been shown that the giving of diphtheria and pertussis vaccine in combination results in a higher level of immunity against diphtheria when infants are immunized before the age of six months than when they are immunized for diphtheria alone after six months.

Whooping cough has been and still is a dangerous disease in very young infants. The mortality due to pertussis occurs largely in the first six months and active immunization must be given early if it is to be effective. Fortunately, hyperimmune serum and some of the antibiotics do afford some benefit in treatment. In the South this need for early immunization is emphasized by the fact that reported Negro death rates for pertussis are two to three times the rates for whites. Rural death rates are generally higher than urban rates.

It is generally advised that all susceptible children of preschool age (those under five years) should be vaccinated against pertussis. Young infants living in institutions and in households where there are older susceptible children, should have immunization started by the time they are three months of age because of the great risk of exposure. Other children should have this immunization started by the time they are six months of age. During the months when pertussis is prevalent in a community, the earlier plan should be used.

The value of early protection against diphtheria is evidenced by the continued reduction in the number of cases reported through the years. This great reduction in both clinical and subclinical diphtheria through active immunization, has introduced a new problem. A generation ago, prior to widespread active immunization, it was generally assumed that during their first few months of life, most infants were protected against diphtheria by antibodies acquired during fetal life from their mothers. Now, fewer and fewer mothers have a sufficiently high antibody level to afford protection to their offspring during the early months of life. This fact points to the need for early immunization against diphtheria.

Tetanus is included in the triple antigen in order to avoid giving antitoxin containing horse serum at a later age. It has also been found that about half the children admitted to hospitals with clinical tetanus have not had antitoxin. This is due to the fact that they had no recognized portal of entry of tetanus bacilli or that their wound had been regarded as so minor that antitoxin had not been given. Had tetanus toxoid been given early and the booster doses administered at the necessary intervals, there would have been a high degree of protection afforded these children.

For a number of years the pediatricians and general practitioners in Virginia have emphasized the value of early immunizations and have made these available in their offices. In addition, the health districts in the state have held free weekly immunization clinics and, on occasions, special clinics for mass immunization of children not immunized by their family physician.

The booster dose of the D.P.T. vaccine may be overlooked and its importance should be emphasized to the parent. A schedule or reminder card should be given for each child. A telephone call or visit from the nurse may be necessary to get some children back.

In this country the rarity of smallpox may lead some to minimize the importance of vaccination against this disease. The control of smallpox has been brought about through vaccination and no relaxation should be permitted. Vaccination of infants is recommended between the sixth and twelfth month and is repeated when the child enters school and when the disease appears in the community.

Both morbidity and mortality resulting from in-

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fections with the above named diseases may be reduced and prevented through the widespread use of immunizations. Illness and death from these diseases may be brought to the irreducible minimum. This is the goal that the Virginia State Department of Health is striving to reach.

MONTHLY REPORT OF THE BUREAU OF COMMUNICABLE DISEASE CONTROL

	Oct. 1954	Oct. 1953	Jan.-Oct. 1954	Jan.-Oct. 1953
Brucellosis	4	4	41	52
Diphtheria	1	9	28	72
Hepatitis	176	211	3284	2059
Measles	88	58	23534	4728
Meningitis (meningococcal)	4	12	84	169
Poliomyelitis	127	89	541	683
Rocky Mt. Spotted Fever	6	3	41	59
Streptococcal Infections (Including Scarlet Fever)	250	328	4003	4690
Tularemia	2	2	31	25
Typhoid Fever	9	6	51	47
Rabies in Animals	26	33	310	382

Schedule of Infant Immunization.

The Child Health Committee of The Medical Society of Virginia and the State Department of Health have requested that the following outline regarding immunizations would be useful to Virginia doctors:

3 Months ——— One dose of alum-precipitated diphtheria and tetanus toxoids and pertussis vaccine combined.
4 Months ——— Second dose.
5 Months ——— Third dose.

A booster dose should be given at:
18 Months ——— 3 Years — and 6 Years
6-12 Months ——— Smallpox vaccination. (Repeat on entering school and when disease appears in community.)

(Published recommendations of American Academy of Pediatrics. Approved by the Child Health Committee of The Medical Society of Virginia and the State Health Department.)

NOTES ON PULMONARY TUBERCULOSIS*

Modern Therapy (V)
Non-Sanatorium Care of the Active Case (B)

Basic treatment of active pulmonary tuberculosis consists essentially of a trial rest schedule, in bed or out, followed by such modification from time to time as may be needed to achieve and maintain over-all treatment requirements. This applies whether it is prescribed alone or supplemented by drugs or other measures.

This naturally is as applicable to the non-sanatorium case as it is to almost all patients who take formal treatment anywhere for active tuberculosis for either cure or "control". Occasional exceptions would be those who continue regularly on reversible pneumothorax or pneumoperitoneum refills, but who have reached a point, in course of healing, where they may otherwise lead *perfectly* normal lives—uninfluenced in any *other* way by the fact that they still have active tuberculosis. (If the collapse is reversible, the presumption is that the procedure is maintained for an active component of disease still believed to be "smouldering" in the compressed lung tissue and which would likely constitute a *demonstrably* definite hazard to health or life were the collapse procedure to be prematurely abandoned.)

Systemic (body) rest is practically synonymous with "conservation of energy" and is *universally* recognized to be of *proven* worth *in and of itself* in the treatment of tuberculosis, as for many other infections. Its continued employment as a therapeutic agent, *even alone*, therefore should not be discarded lightly.

When a case is inoperable, there is no obligation to operate. Thus surgical statistics can be maintained upon a fairly high and respectable plane. But in the past particularly, many a far advanced case, being incurable by bed rest or surgery, still had to have bed rest prescribed or at least provided. Failure to do little more than postpone death under these circumstances should not thoughtlessly be chalked up on the debit side of systemic rest—unconsciously to prejudice one against its determined and enthusiastic application in the many many instances where it can prove of vital, often *crucial* importance, whether used alone or in conjunction with suitable medicinal and/or surgical adjuvants (in or outside a sanatorium).

There is nothing to date to indicate that drug therapy or surgery can *completely* replace systemic rest. Nor, is there, in spite of prevailing widespread practice to the contrary, convincing evidence to indicate that drugs need invariably be prescribed for every newly diagnosed non-sanatorium case, as a supplement to systemic rest.

One need only call to mind the acknowledged fact that curtailment of extra-curricular pursuits such as golf, gardening, poker, hunting, woodwork, etc., is, in itself, no mean therapeutic weapon! In some instances, as much as 20-50% of energy can be conserved every twenty-four hours in this way alone, during the 8 to 12 hours many persons neither work nor sleep. It naturally follows that the resulting systemic rest, or even a *far* lesser amount, can, in many patients, add up to "quantity sufficient" for the purpose—which is the primary objective of treatment. Thus in selected cases, *needless* sanatorium care can be obviated. Likewise drug therapy can be held in abeyance.

In the December 1953 issue of the Virginia Medical Monthly attention was called to the fact that the three principle anti-tuberculosis drugs—streptomycin, PAS and Isoniazid—are seldom administered concurrently. Apparently most physicians prefer to hold *one* of these *in reserve*, at least initially. If this makes sense, then an initial withholding of drug therapy *altogether* in selected cases (among those not in need of immediate sanatorium care) would appear not to be wholly lacking in rationale. Moreover, by permitting Nature, where possible, to have an opportunity to function effectively through employment of systemic rest alone, in carefully regulated amounts, gratuitous creation of resistant strains of tubercle bacilli can be avoided, for whatever this may bode.

It is generally agreed that anti-tuberculosis drugs, when given at all, should, with few exceptions, be administered continuously over many many months (rather than intermittently, or for only a few months). Accordingly, it would seem, on general

*Prepared by the Virginia State Health Department.

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principles, that anti-tuberculosis drugs, like penicillin and other antibiotics for non-tuberculous infections, should be prescribed only after extremely careful appraisal of immediate indications in each individual case with a sharp eye to possible future demands.

When drugs *are* given, they should be prescribed in standard dosages the same as for sanatorium patients (December 1953 issue Virginia Medical Monthly).

Unfortunately it is true that greater cooperation from patient and family must be cultivated where systemic rest alone is prescribed than when a more liberal schedule is instituted from the beginning—made possible by concurrent use of drug therapy.

In instances where a patient is given drug therapy primarily because his daily expenditure of energy cannot be adequately controlled otherwise, there is laid bare an elementary lack of understanding *or* capacity for self-discipline (or both) which tends to adversely affect ultimate prognosis under *any* form of treatment. Too often there comes a time sooner or later in the treatment "career" of *many* patients when rest schedules must be temporarily deliberalized. It is an all too common experience of those specializing in tuberculosis to note that patients whose *earlier* treatment called for but vague, perfunctory performance in the field of systemic rest were handicapped, sometimes disenchanted, even rebellious, when at an eleventh hour a more stringent regime was prescribed requiring a high degree of self control and unflinching discipline—for which the patient was wholly unprepared—psychologically even more than physically.

Careful orientation of every patient and family, *from the very beginning,* upon basic facts of tuberculosis and its principles of treatment, is a key stone upon which can be built intelligent and willing cooperation upon the part of all to carry out *whatever* treatment regime may from time to time be prescribed, *rigid* or liberal. Cheerful and consistently purposeful cooperation almost invariably will enhance likelihood of complete and permanent cure, whether or not drugs are administered in or outside a sanatorium. Public Health Nurses are being trained to assist the practicing physician in the carrying out of effective orientation programs for patients of all levels of intelligence and with every kind of background.

Needless to say, to orientation in basic facts about tuberculosis *as a disease,* and its principles of treatment, must be added an intelligent consideration of emotional, social, domestic and *financial* problems which commonly beset many people even in perfect health but which must be resolved without delay when a patient and family are faced with serious and prolonged illness.

Among those medically eligible for non-sanatorium care are the large number of dischargees from sanatoria. While judgment may vary between physicians as to optimum time for discharge, both on general principles and as applied to individuals, it can safely be assumed that patients permitted to go home on medical advice are, for the most part, no longer in need of institutional care as such, but almost invariably, under any practicable discharge plan, they *do* require *further* treatment of some type *for tuberculosis* upon return to place of residence. Being in need of additional therapy, they are to be regarded as having active disease demonstrable or presumed. This may or may not coincide with their "official" sanatorium classification of activity status at time of discharge. Certainly by comparison with the "apparently inactive" case (see September and October issues, Virginia Medical Monthly), no longer required to take *any* treatment, their residual tuberculous lesions upon discharge constitute a continuing, albeit constantly diminishing hazard to health or life, until such time as they can qualify for reclassification. To retain patients regularly in sanatoria until no longer in need of any treatment whatever is necessary, impracticable and prohibitively costly.

As a matter of fact many if not most patients are still on drug therapy upon discharge in addition to a definitely prescribed rest schedule. Some take pneumoperitoneum, *also* in and of itself presumptive evidence of active disease.

Non-sanatorium treatment during the first few months following discharge normally should conform to recommendations made by the sanatorium staff.

* * * * *

Upon one of the darkest pages in the history of tuberculosis is the roster of the many, many *curable* patients who took only enough systemic rest to keep from dying (too soon) in the days when systemic rest was the only known widely used therapeutic agent.

Later thoracoplasty, pneumothorax, phrenic nerve operations, and pneumoperitoneum were extensively employed, which enabled more people to get half well sooner.

Today newly introduced anti-tuberculosis drugs and modern excisional therapy make possible *in*complete cure of additional thousands even more quickly and with less effort.

One might even go so far as to say that comparatively few persons have *ever* succumbed to tuberculosis in and of itself. Those who have failed to get well almost invariably have done so because of *belated, half-hearted* or *mis*-directed efforts to get well.

On the other hand one should hastily add that many, many patients have gotten completely and permanently well under *each* of the treatment regimes enumerated, when added to an appropriate schedule of systemic rest. However, the not too flattering record *as a whole* does point up the importance of attending physicians generally familiarizing themselves thoroughly with the relatively simple principles and practical problems involved in the treatment of the average newly diagnosed case of active pulmonary tuberculosis, *independently* of medicinal and surgical adjuvants at their disposal.

At least 90% of patients diagnosed reasonably early, with or without symptoms, who, during course of treatment, consistently do the *right* things at the right *time* and *long enough*, cannot help but get completely and permanently well. That is to say they can look forward to leading a perfectly normal life indefinitely, without undue risk of relapse. *All of this without drugs!* Drugs and modern surgery, *used properly*, as adjuvants where indicated, can, of course, speed up the healing process *tremendously*.

When treatment proves to be inadequate, there is small consolation in the knowledge that prescribed therapy included the latest medicinal and surgical aids. When treatment *is* adequate, it *should* be a satisfaction to know that success has been achieved, in *most* instances, at *minimum cost* in time, money, and *human misery* to the patient and to his community, with or without drugs, with or without surgery, in or outside a sanatorium.

Notes from National Tuberculosis Association.

The steady reduction in mortality rates of tuberculosis is, in no small measure, due to social advances and to great achievement of preventive no less than therapeutic measures. Philip Ellman, M.D., J. of Royal Institute of Pub. Health & Hygiene, August, 1954.

Routine chest roentgenograms for patients admitted to the hospital are more productive than a routine survey on a general population of essentially normal persons. Figures vary tremendously according to the type of hospital, the type of patients admitted, and the care with which the roentgenograms are studied and reported by the roentgenologist. Morris H. Levine, M.D., and Stanley Crosbie, M.D., J.A.M.A., Sept. 18, 1954.

The importance of the tuberculin test in the program for the elimination of tuberculosis cannot be overestimated. The percentage of positive tuberculin reactors is an indirect measure of the amount of undetected open tuberculosis in the community. The presence of a positive tuberculin test pinpoints the individuals which comprise the group in which new active cases will develop. The discovery of a recent conversion from a negative to a positive tuberculin reaction means that there is a known or unknown active case among the converter's associates. David T. Smith, M.D., J. School Health, Sept., 1954.

There has been a striking change in the tuberculosis picture over the past 25 years. A marked shift from female to male and also towards the older age groups both regarding morbidity and mortality has occurred. Tuberculosis is becoming increasingly a disease of people over 50 years of age and especially is this so in respect to males. G. C. Brink, M.D., Canadian J. Pub. Health, May, 1954.

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MENTAL HEALTH

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Inservice Training of Attendants at Lynchburg Training School and Hospital*

It is a well known fact that training and education make a better employee in any type of work. The care of the mentally ill, mentally deficient, or epileptic patient requires a special type of training that cannot be obtained in general education or training centers. With the awareness of this factor and that trained personnel can be of more benefit to the patient and to the operation of the hospital, the Department of Mental Hygiene and Hospitals, through the Director of Nursing Education, has developed a training program for the nursing service personnel employed by the mental hospitals and the training schools.

The basic principles of the training programs for both the mental hospitals and training schools are the same. However, certain phrases of the training is adapted to the type of hospital in which the attendants are employed and are being trained. In September 1952, the Department of Mental Hygiene and Hospitals approved a revised program of training at the Lynchburg (Colony) Training School and Hospital for attendants and attendant trainees.

Believing that a knowledge of the training received by attendants will alleviate family anxiety during care and treatment, the following outline of attendant training is presented by the author, as prescribed by the Department.

The purpose of this training program is to improve the standard of patient care within the mentally retarded institutions by training a group of nursing service personnel who will have the necessary understanding, knowledge and skills to contribute to the effective care of mentally retarded patients.

The program consists of 115 hours which includes both ward and classroom work, with audio-visual aids and field trips when this can be arranged. The present curriculum is divided into eleven courses with a definite number of hours allocated to each course.

Instruction of an attendant begins with the employment interview where the applicant is given detailed information concerning his work and what is expected of him. At this time, the instructor also gives him one-hour of instructions on the type of patients we care for, protection and treatment of the patient, fire prevention and control, personnel policies and personal hygiene. He is also given a manual of information to read before he reports back to the hospital for work.

During his first working days he goes into the orientation class where he spends ten hours. The objectives of this course may be listed as following:

1. To give new employees a broad and correct understanding of the functions of the hospital, its policies and physical plant.
2. To facilitate the adjustment of the employee to the hospital, to help him feel secure in his environment and to help him function in an effective manner.

On completing the orientation course each attendant is placed in another course being taught at that time.

The remaining courses and hour requirements for each are listed below:

1. Anatomy and Physiology—12 hours.
2. Environmental Therapy or Ward Housekeeping—5 hours.
3. Practical Nursing Care—25 hours.
4. Elementary Bacteriology—10 hours.
5. Food Handling and Sanitation—5 hours.
6. Understanding the Well Adjusted Person—10 hours.
7. Nursing Care of Mentally Retarded Child in School for Mentally Retarded—12 hours.
   Nursing Care of Epileptic Patient—4 hours.
   Protective Nursing Measures—4 hours (20 hour course).
8. Tuberculosis Nursing—5 hours.
9. Nursing Care of Aged—5 hours.
10. Contributions of Other Departments to the Care and Rehabilitation of the Patient—8 hours.

The attendant training program comes under the Nursing Service but other departments in the hospital contribute a part to the teaching of the various courses.

The student is given hospital time to attend the classes but studies and does outside reading assignments on his own time.

*Article prepared by Lillian A. Riddle, RN., Lynchburg Training School and Hospital, Colony, Virginia.

All employees, whether experienced or not, must take all courses. Examinations are given at the completion of each course; anyone failing must retake the examination or repeat the course, depending upon several factors.

Classroom records are kept on file of each attendant taking the courses. Efficiency records are also turned in on the attendant's ward work by the professional nurse who supervises all practical work.

When the attendant satisfactorily completes the prescribed course, a graduation exercise is held and he is awarded a certificate by the Department of Mental Hygiene and Hospitals, and is thereby qualified and eligible for employment as a hospital attendant.

We feel that we have derived many benefits from this attendant training course. Not only has patient care been improved but it has helped to attract more desirable material for attendants.

We, also, believe in time that it will reduce the large turnover of attendants in our hospital system. Those attendants who do leave the services after they have attended classes will have a better attitude toward patient care in the hospital which will certainly promote better relationships between the hospital and the community.

BOOK ANNOUNCEMENTS

The Concepts of Schizophrenia. By W. F. MCAULEY, M.D. Belf., D.P.M., R.C.P.S.I., Principal Psychiatric Registrar, Downshire Hospital, Northern Ireland. With a foreword by John H. Ewen, F.R.C.P., D.P.M., Formerly Physician and Lecturer in Psychological Medicine at the Westminster Hospital. Philosophical Library, New York. 1954. 145 pages. Price $3.75.

Primer of Allergy. A Guidebook for Those Who Must Find Their Way Through the Mazes of This Strange and Tantalizing State. By WARREN T. VAUGHAN, M.S., M.D., Richmond, Virginia. With illustrations by John P. Tillery. Fourth Edition. Revised by J. Harvey Black, M.D., Dallas, Texas. St. Louis, The C. V. Mosby Company. 1954. 191 pages. Price $4.25.

The Physician and His Practice. Edited by JOSEPH GARLAND, M.D., Editor, The New England Journal of Medicine. Little, Brown and Company, Boston. 1954. xii-270 pages. 1954.

Clinical Aspects of the Autonomic Nervous System. By L. A. GILLILAN, Ph.D., M.D., Associate Professor of Anatomy, Graduate School of Medicine, University of Pennsylvania. Little, Brown and Company, Boston. 1954. xii-316 pages. With 42 Illustrations. Cloth. Price $6.50.

The Scourge of the Swastika. A Short History of Nazi War Crimes. By LORD RUSSELL OF LIVERPOOL, C.B.E., M.C. Philosophical Library, New York. 1954. xii-259 pages. With 16 pages of halftone illustrations. Cloth. Price $4.50.

The Manual of Antibiotics. 1954-1955. Preparations, Therapeutic Index, Generic and Trade Names, Producers. Prepared under the Editorial Direction of HENRY WELCH, Ph.D. Distributed by American Pharmaceutical Association, Washington, D. C. Medical Encyclopedia, Inc., New York, N. Y. 1954. 87 pages. Cloth. Price $2.50.

Uses of Wine In Medical Practice. A Summary. Published by the Wine Advisory Board, San Francisco, California. 42 pages. This booklet is available to our readers by addressing the publisher.

The Manual of Antibiotics. 1954-1955. Preparations, Therapeutic Index, Generic and Trade Names, Producers. Prepared under the Editorial Direction of HENRY WELCH, Ph.D. Distributed by American Pharmaceutical Association, Washington, D. C. Medical Encyclopedia, Inc., New York, N. Y. 1954. 87 pages. Cloth. Price $2.50.

This small book, prepared under the editorial direction of the well known authority on antibiotics, Henry Welch, is intended to serve physicians, pharmacists and nurses as a handbook for identification of the composition of the many antibiotic combinations on the market. The antibiotics are arranged alphabetically by their generic names and the trade names (with manufacturer) are listed with their generic equivalents. Indices of manufacturers with addresses, trade names, and generic names are included. In this way, a user of the book would check a trade name in the index and on the page noted would find this product as well as all other products containing the same antibiotic. This is a handbook and gives only very general indications for use. Specific therapy and doses are not included in the descriptions.

The alphabetical order for some strange reason is not adhered to throughout in spite of the author's intention. An occasional isolated example of omission of proprietaries was noted, and at least one case of a mistaken trade name. Physicians may find this book helpful if they have no other source for information of this type and are interested in comparing composition of proprietary products.

WARREN E. WEAVER

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WOMAN'S AUXILIARY TO THE MEDICAL SOCIETY OF VIRGINIA

New Officers.

At the annual meeting in Washington, November 2nd, Mrs. Maynard R. Emlaw, Richmond, succeeded Mrs. K. W. Howard, Portsmouth, as president, and the following other officers were elected: president-elect, Mrs. Mervin W. Glover, Arlington; vice-presidents, Mrs. Lee S. Liggan, Irvington; Mrs. Cecil C. Hatfield, Saltville; and Mrs. Charles A. Easley, Danville; recording secretary, Mrs. J. W. Carney, Newport News; corresponding secretary, Mrs. Levi W. Hulley, Jr., Richmond; treasurer, Mrs. William C. Barr, Richmond; and directors, Mrs. Kalford W. Howard, Portsmouth; Mrs. J. L. DeCormis, Accomac; and Mrs. Paul Pearson, Warsaw.

Chairmen of Standing Committee are: Finance —Mrs. Luther C. Brawner, Richmond; Legislation— Mrs. Frederick L. Finch, Richmond; Organization —Mrs. Mervin W. Glover, Arlington; Program— Mrs. C. M. McCoy, Norfolk; Publications—Mrs. William S. Grizzard, Petersburg; Public Relations— Mrs. Eugene Grether, Alexandria; Revisions—Mrs. John R. St. George, Portsmouth; and Today's Health —Mrs. Forrest M. Swisher, Alexandria.

Special Committee Chairmen are: American Medical Education Foundation—Mrs. Delmas B. Jones, Norton; Bulletin—Mrs. J. R. B. Hutchinson, Arlington; Cancer Control—Mrs. Herman W. Farber, Petersburg; Civil Defense—Mrs. L. B. Waters, Lynchburg; Clipping Service—Mrs. Macey H. Rosenthal, Lynchburg; Leigh-Hodges-Wright Memorial—Mrs. Fletcher J. Wright, Sr., Petersburg; Mental Health—Mrs. Joseph R. Blalock, Marion; Nurse Recruitment—Mrs. Bernard H. Raymond, Norfolk; Research and Romance of Medicine—Mrs. Lee B. Martin, Arlington; Councilor to Southern— Mrs. K. W. Howard, Portsmouth; Jane Todd Crawford Memorial—Mrs. Edward S. Ray, Richmond; Historian—Mrs. Hawes Campbell, Richmond; and Parliamentarian, Mrs. Thomas N. Hunnicutt, Jr., Newport News.

Petersburg.

The following officers were installed by Mrs. Carney C. Pearce, Jr., parliamentarian, at the meeting on October 26th: president, Mrs. Joe McCormick; president-elect, Mrs. Kirby T. Hart, Jr.; vice-president; Mrs. Joseph P. Whittle; recording secretary, Mrs. Mark E. Holt, Jr,; corresponding secretary, Mrs. Francis Payne, Jr.; treasurer, Mrs. Philip Jacobson; historian, Mrs. Meade Edmunds; and board member, Mrs. Clyde W. Vick, Jr., retiring president.

Several interesting projects are being planned for the new year. Foremost among them is the establishing of a future nurses club in the high school for girls who are interested in nursing as a career. The auxiliary voted to establish a scholarship fund of $200.00 a year. This is to start one girl each year and contribute to her expenses during her three year course. Mrs. N. F. Wyatt is chairman of this committee.

Members were asked to save children's clothes, that were in good condition, to be used by the Social Service Bureau.

Much interest is being shown in aiding the local chapter of the National Association for Retarded Children. There is a class for eight of these children and the auxiliary has sent $15.00 to be used for equipment and plans to send more financial aid when needed. A Halloween party was given for the children and others are planned during the year. Mrs. Nelson Smith is in charge of this project.

MARGARET S. WHITTLE (MRS. JOSEPH P.)

Pittsylvania Academy.

At the meeting of this Auxiliary on October 14th at Memorial Hospital in Danville, the following officers were installed: president, Mrs. G. V. Thompson, Chatham; president-elect, Mrs. H. R. Bourne, Danville; vice-president, Mrs. W. C. Fitzgerald, Danville; recording secretary, Mrs. James Beaton, Gretna; corresponding secretary, Mrs. Jesse Clore, Jr., Danville; and treasurer, Mrs. Clifford Gaddy, Danville.

The outgoing Philanthropy Chairman, Mrs. J. R. Eggleston, reported that one year scholarships have been given to three student nurses now in training at Memorial Hospital. It was voted to furnish capes for these nurses.

The following committee chairmen were appointed by Mrs. Thompson: philanthropy—Mrs. D. L. Arey; finance—Mrs. H. A. Wiseman, III; publications—Mrs. S. C. Hall, Jr.; program—Mrs. John Hooker; social—Mrs. Charles Easley, Jr.; Doctor's Day picnic—Mrs. Henry Langston and Mrs. W. E. Dickerson; parliamentarian—Mrs. J. R. Eggleston;

nurse recruitment—Mrs. John Marsella; health—Mrs. J. D. Beale; Bulletin—Mrs. W. L. Sager; Leigh-Hodges-Wright—Mrs. H. A. Wiseman, Jr.; Jane Todd Crawford—Mrs. E. B. Robertson; legislation—Mrs. Prentice Kinser; historian—Mrs. J. J. Neal; research and romance of medicine—Mrs. H. H. Hammer; public relations—Mrs. John L. Clare; mental health—Mrs. L. R. Soper; and telephone—Mrs. C. W. Pritchett.

Following the business session, a delicious luncheon was served.

IDA H. HALL (Mrs. S. C. Jr.)

Doctors Need Help.

One of the biggest problems of today's physician is the diseases resulting from frustration, loneliness and lack of occupation—diseases he cannot cure alone.

Dr. Robert J. Needles, St. Petersburg, Fla., said in the October 9th Journal of the American Medical Association that what is most needed for persons afflicted with this "modern pestilence" is "better understanding of life away from physicians' offices." "The medical profession, with all its progress, needs outside help on the problem of the emotionally ill, displaced, abandoned, chronically unhappy, or otherwise handicapped persons." "Physicians can suggest, they can advise, they can warn, but they cannot go with these persons into the community and lead them into new interests and new drives to demonstrate reasons for living." "This is, and must be, the responsibility of society. There is too much wastage of human resources in the communities' own back yards . . . new and stimulating opportunities must be furnished from outside the medical profession."

The physician does try to cure the patient who suffers chronic fatigue or ever-present stomach complaints, who forever seeks a cure and is made increasingly unhappy by each new medical miracle because "it seems not to apply to him." But all the doctor's efforts may not cure the illness caused by a "sick society"—by too much leisure time and not enough to do, by loss of old values, and by lack of support from other people. Although this patient's symptoms are quite real—he actually suffers headaches, insomnia, stomach pains, heart distress, and other complaints—the cause is not physical. Functional illness may be "a mask" to hide loneliness, disillusionment, marital infidelity, or economic hardship. The trouble is "with man's conversion into a modern wanderer uprooted from his past, his old assurances and prejudices washed away and not replaced by a new solidity." Part of it is what Dr. Needles called "a loss of community," a loss of old values that used to rule moral behavior, and loss of the family and social support "that used to bolster persons in time of emotional stress." Changes in politics, economics, religion, and family life in the last few decades have left many "without any order of belief."

"Too many persons have been uprooted from their environment or have lost the sources of the reassurance that keeps persons in emotional balance. Many of them need only to reestablish themselves in a group to find again the reinforcing benefits of friends and neighbors." In these cases, churches, clubs, and lodges could help. More important, ways and means for developing new interests and skills are needed. These would fill the extra leisure hours made possible by advances in mass production and big business. When work time in the factory and at home is reduced, the person "has little on which to fall back in his need for useful activity."

Dr. Needles urged that nongovernmental agencies take an interest in providing tension relief, such as adult education classes in useful sparetime occupations, or local craft and hobby centers. "Not enough practical effort is being devoted to the most necessary thing, giving persons something to do, something they can do themselves, something that will not only serve to take their minds off their internal rebellions but will actually produce a visible and soul-satisfying result."

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EDITORIAL

A Change in the Constitution

THE 1954 annual session of The Medical Society of Virginia witnessed the inauguration of a profound change of policy in that organization. The word *white* which has qualified membership in the Society for half a century was deleted from Article IV of the Constitution, thus permitting the election of physicians other than those of the Caucasian race.

Prior to 1902, no reference to race appeared in the Constitution or by-laws of the Society. In that year a resolution was presented to the House of Delegates proposing that the word *white* be inserted as a requisite for membership. After discussion and by vote the resolution was laid on the table where, despite several efforts to revive it, it continued to rest, as there is no record of its formal adoption. Nevertheless, in 1905 the word *white* mysteriously appeared in the printed Constitution, and has been retained there as well as in the component societies whose Constitutions must be in conformity with that of the state society.

As the number of licensed colored physicians in the state increased, it became more and more apparent that in excluding them from the advantages of scientific meetings, the Society was failing in its avowed purposes of promoting the science and art of medicine, the protection of the public health and the betterment of the medical profession. The year 1948 saw the beginning of a movement that led to the recent action of the Society. Under the presidency of Dr. M. P. Rucker, a committee composed of past presidents was formed and charged with the responsibility of investigating the problem of colored physicians and reporting to the Society with recommendations. The committee's report, received at the 1949 annual session, recommended that the word *white* be deleted from the Constitution and that component societies give careful consideration to the matter of accepting into their membership Negro physicians who are eligible according to standards of character, and professional ability, and such other requirements as seen desirable to the local society.

When presented to the House of Delegates, the committee's proposal received strong support but, failing to secure the two-thirds majority necessary to change the Constitution, was rejected. The committee was continued and at two subsequent meetings, 1950 and 1952, again recommended that the word *white* be deleted, but again missed the required majority by a few votes. Nevertheless, the matter had been brought to the attention of the profession in the state and became a popular subject of discussion. As conditions throughout the country changed and several Southern states moved toward lifting racial restrictions in their medical societies, it became obvious that Virginia would soon follow.

Physicians of any race are now eligible to membership in The Medical Society of Virginia and through that to membership in the American Medical Association. However, membership in the state society is contingent upon membership in a component or local society. It follows, therefore, that the immediate effect of the change in the Constitution will depend upon the action of local societies, several of which have already accepted Negro physicians as members.

J.M.H.

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SOCIETY PROCEEDINGS

Mid-Tidewater Medical Society.

At the meeting of this Society on October 26th, Dr. Thomas E. Smith, Hayes, was elected president; Dr. Carl Broaddus, Newtown, president-elect; Dr. M. H. Harris, West Point, re-elected secretary; and Dr. William H. Hosfield, West Point, treasurer. A vice-president was elected from each county in the Society and they are: Drs. J. R. Gill, Mathews; Raymond S. Brown, Gloucester; Herman Bailey, Yorktown; J. F. Jones, Essex County; Edward Lewis, Bowling Green; A. W. Lewis, Jr., Aylett; A. L. Van Name, Urbanna; and J. R. Parker, Providence Forge.

The next meeting of the Society will be held in West Point on January 25th.

Patrick-Henry Medical Society.

Officers for 1955 were elected at the meeting on October 8th and are as follows: President, Dr. F. T. Renick; vice-president, Dr. C. P. Sherman; and secretary-treasurer, Dr. T. H. Dickerson. All officers are from Martinsville.

Dr. Julian R. Beckwith, University of Virginia, presented an interesting paper on "Hypertension" at the scientific session.

Northern Neck Medical Society.

Dr. Norman R. Tingle, Nuttsville, was elected president of this Society at a recent meeting, and Dr. J. M. Dailey, Reedsville, re-elected secretary.

The Washington County Medical Society

Held its first meeting of the year at the Martha Washington Inn in Abingdon on October 21st. The following officers were installed: President, Dr. J. S. Shaffer, Abingdon; vice-president, Dr. Catherine Smith, Abingdon; and secretary-treasurer, Dr. J. M. Suter, Abingdon.

Although the membership of this group is small, there being only seventeen members, some of the outstanding accomplishments during the year are: immunization of over 7,000 children with gamma globulin in order to combat a serious poliomyelitis epidemic which was existing in July of 1953; the immunization of nearly 500 second grade children with three innoculations of the Salk vaccine and also the drawing of blood specimens twice in 1954; and the furnishing of medical coverage for all visits of the blood mobile from the Roanoke Blood Center in the County during 1953-1954.

Williamsburg-James City Medical Society.

At a meeting of this Society on November 10th, Dr. James F. Conner, secretary-treasurer of the Virginia Diabetes Association and chief of professional services at the VA Hospital, Kecoughtan, spoke on Cancer Detection.

Warwick-Newport News Medical Society.

At the October meeting of this Society, Dr. John B. Truslow, Dean of the School of Medicine, Medical College of Virginia, spoke on Problems of Intern and Resident Training in Hospitals Not Associated with a Medical School.

At the November meeting, Dr. Barnes Gillespie, Newport News, spoke on The Survey of Thirty-One Severe Back Injuries for Nine Months of 1954.

Dr. William A. Read, Newport News, is president of this Society, and Dr. F. Ashton Carmines, also of Newport News, is secretary-treasurer.

The Hanover County Medical Society

Has been reactivated and the following officers named: President, Dr. John Hamner, Jr., Ashland; vice-president, Dr. J. A. Wright, Jr., Doswell; and secretary-treasurer, Dr. Claude Kelly, Mechanicsville.

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NEWS

CALENDAR OF COMING EVENTS

EVENING MEDICAL LECTURES—University of Virginia, Charlottesville, December 6. Dr. William G. Hardy, Johns Hopkins Hospital, "Hearing and Language Disorders in Young Children"

SECOND ANNUAL CONFERENCES ON THERAPY—University of Virginia Medical School, December 10, 9:00 a.m.-5:00 p.m.

EVENING MEDICAL LECTURES—University of Virginia, Charlottesville, December 13. Dr. Joseph E. Smadel, Walter Reed Army Medical Center, "Current Problems in Virology"

ANNUAL CONGRESS ON OBSTETRICS AND GYNECOLOGY—Palmer House, Chicago, December 13-17

TRI-STATE MEDICAL ASSOCIATION—Hotel Chamberlin, Old Point, Va., February 21-22

NATIONAL CONFERENCE OF RURAL HEALTH—Schroeder Hotel, Milwaukee, Wis., February 24-26

INTERNATIONAL ACADEMY OF PROCTOLOGY—The Plaza Hotel, New York City, March 23-26

EASTERN STATES HEALTH EDUCATION CONFERENCES—New York Academy of Medicine, New York City, April 21-22

First Interstate Scientific Assembly

The 1954 Annual Meeting of The Medical Society of Virginia was held in Washington, October 31-November 3, and will be written into the annals of the Society as one of the most memorable meetings in its history.

Known this year as the First Interstate Scientific Assembly, the meeting was held jointly with the Medical Society of the District of Columbia, and lived up to its advance billings as an important and historic event.

Perhaps the most important single development was the precedent-shattering decision of the House of Delegates to amend the Society's Constitution by deleting the word "white" from Article IV. This momentous decision, commented on editorially elsewhere in these pages, was ratified by a general meeting of the Society's membership—the vote being 166-101.

From the scientific point of view, the program was one of the most attractive ever held in this area. Its appeal was reflected in the total registration of 3,335—of which 2,001 were physicians. The following breakdown tells the complete story.

Virginia Physicians	717
D. C. Physicians	1,284
Auxiliary	266
Guests	1,068
	3,335

The Medical Society of Virginia can be proud of the award bestowed on Dr. Roy M. Hoover, Roanoke, as the Virginia physician who made the greatest contribution to the physically handicapped during the year. The presentation was made by General Maas, Chairman of the President's Committee on Employment of the Physically Handicapped.

By way of proving the old adage about "All work and no play . . .", an unusually complete calendar of social events was featured. The annual banquet needed three banquet halls to accommodate the "overflow" attendance which threatened the 1,000 mark. "Skitsophrenia", the home talent show featuring physicians and their wives, played to a "standing room only" audience of over 900.

The meeting marked the installation of Dr. Carrington Williams as President of the Society and Mrs. Maynard R. Emlaw as President of its Woman's Auxiliary.

Elected to office were Dr. James P. King, President-elect; Dr. James W. Love, First Vice President; Dr. Waverly R. Payne, Second Vice President; Dr. Benjamin W. Rawles, Jr., Third Vice President; and Robert I. Howard, Executive Secretary-Treasurer. The following are Councilors: Dr. A. A. Creecy, Dr. Walter P. Adams, Dr. Guy W. Horsley, Dr. Wilkins J. Ozlin, Dr. Louis P. Bailey, Dr. Frank A. Farmer, Dr. Harold W. Miller, Dr. McLemore Birdsong, Dr. James P. Williams, and Dr. Harry C. Bates, Jr. Dr. Vincent W. Archer was elected Dele-

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gate to the American Medical Association and Dr. Allen Barker, his Alternate.

Dr. A. I. Dodson,

Richmond, addressed the Tennessee Valley Medical Assembly in Chattanooga, September 27-28. His subject was "Youth and Abuse of Antibiotics in Infections of the Urinary Tract".

Before returning home, Dr. and Mrs. Dodson spent a week at Gatlinburg, Tennessee.

Dr. M. J. W. White,

Luray, was a forum speaker at the Baptist Youth Forum in Stanley during October. A series of discussions was held on "Careers for Youth" and Dr. White's subject was "Medicine".

Licensed Physicians in Virginia.

A roster of licensed physicians in Virginia has been released by Dr. K. D. Graves, Secretary of the State Board of Medical Examiners. There were 2,980 registered as of July 1st. This is an increase of 86 over 1953 and an increase of 407 in the last seven years.

Dr. Arthur H. Taylor,

Recently of Brownsburg, is now located in Suffolk where he will share offices with Dr. W. H. Michael in the general practice of medicine.

Drs. William H. Higgins, Sr. and Jr.,

Announce the removal of their offices to 3540 Floyd Ave., Richmond.

New Urological Association.

The Valley of Virginia Urological Association was organized in July at a meeting in Staunton. Charter members are Drs. Richard H. Lowe, Jr., Roanoke; Christopher Stuart, Jr., Winchester; Samuel Graham, Staunton; C. I. Sease, Jr., Harrisonburg; Thomas B. Baer, Bluefield, W. Va.; J. G. Warden, Hagerstown. Md.; E. W. Kirby, Jr., Bluefield, W. Va.; and Frank N. Buck, Jr .,Lynchburg.

Dr. Stuart was elected temporary chairman of the group and Dr. Sease temporary secretary. Meetings will be held quarterly.

Dr. Brent Honored.

Dr. Meade S. Brent, superintendent of Central State Hospital, Petersburg, was one of three employees of the state mental hospitals who was honored at a testimonial dinner held in Richmond October 13th. Dr. Brent has been superintendent in Petersburg since 1938 and he has asked to be retired as soon as a successor can be found. He is seventy-three years of age.

Dr. Cottrell Promoted.

Dr. James E. Cottrell, chief of professional services at the Veterans Administration Hospital in Richmond, has been promoted to manager of the 1100-bed Hospital, succeeding Dr. Glen W. Doolen who resigned in September.

A.M.A. Deadline for Papers and Exhibits.

The Council on Scientific Assembly of the American Medical Association announces the deadline for those who wish to participate in the Atlantic City meeting, June 6-10, 1955. For section papers, this is December 15, and for scientific exhibits it is January 10th. Applicants should communicate with the Secretary or the Representative to the Scientific Exhibit of the Section in which they are interested. Further information may be obtained from the Secretary, Council on Scientific Assembly, American Medical Association, 535 North Dearborn St., Chicago 10.

Dr. Paul Hogg,

Newport News, has been elected president of the Peninsula Chapter of the Virginia Society for Crippled Children and Adults.

Seminar on Ophthalmology and Otolaryngology.

The ninth annual University of Florida Midwinter Seminar in Ophthalmology and Otolaryngology will be held at the Sans Suci Hotel in Miami Beach the week of January 17, 1954. The lectures on ophthalmology will be presented on the 17th-19th, and those on otolaryngology the 20th-22nd. A midweek feature will be the Midwinter Convention of the Florida Society of Ophthalmology and Otolaryngology on the afternoon of the 19th to which all registrants are invited.

Full information may be obtained from Dr. Shaler Richardson, 111 West Adams Street, Jacksonville, Florida.

New Hospital Pavilion at Jefferson.

The Jefferson Medical College, Philadelphia, has just completed a new fourteen-story $7,500,000 hospital pavilion as an addition to the present hospital and medical teaching facilities. The formal opening ceremony was held on November 8th and a series

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of events and tours were held for the next two weeks.

This 300-bed, ultra-modern addition, will accomodate approximately 8,500 additional patients yearly. There are seven nursing floors with one devoted exclusively to maternity patients, with optional "rooming in" maternity service, enabling babies to occupy adjoining area to mother's bed. All patient rooms have attractive views of the city by virtue of their top location on the building. Each has its own toilet facilities and oxygen is piped into each room. Voice stations at each bedside will enable patients to converse with their nurse at her station. A televoice station also allows doctors to dictate reports from many locations to a central automatic recording station.

Fourteen operating rooms on two floors make it possible to centralize all operating work in the new building. Expanded radiology and clinical laboratories also occupy individual floors. Another floor for gynecology and obstetrics includes four operating rooms, four delivery rooms and three labor rooms.

Solaria at the nursing floor levels high above the ground with cantilevered open air balconies face the south and north. A covered roof terrace for convalescent patients crowns the pavilion.

Dr. Rea Honored.

Dr. Montie L. Rea, who has been practicing in Albemarle County for fifty years, was honored recently at the Martha Jefferson Hospital, Charlottesville, for his half-century service. His portrait was presented to the hospital and will be hung in the lobby.

Dr. W. Taliaferro Thompson, Jr.,

Richmond, was installed as vice-president of the Davidson College Alumni Association at its twenty-ninth homecoming on October 30th.

Dr. L. W. Hulley, Jr.,

Richmond, has been appointed medical advisor to the State Industrial Commission, succeeding the late Dr. J. Fulmer Bright.

Officers of Virginia Medical Service Asociation.

Dr. H. Grant Preston, Harrisonburg, has been reelected president of this Association and Dr. Claude A. Nunnally, Fredericksburg, has been named chairman of the board of directors. Dr. Benjamin W. Rawles, Jr., is vice-president, and Dr. D. Edward Watkins, Waynesboro, is secretary. Dr. Wilkins J. Ozlin, South Hill, was elected a member of the board of directors and the following doctors were re-named members: Dr. Russell M. Cox, Portsmouth; Dr. H. B. Holsinger, Farmville; Dr. Herbert C. Jones, Petersburg; and Dr. Herbert D. Wolff, Jr., Alexandria.

For Sale.

Complete office equipment, including fluoroscope, two sterilizers, metabolism machine, etc., in excellent condition. Owned by general practitioner, recently deceased. Contact Mrs. J. Edward Amiss, Altavista, Va. (*Adv.*)

For Sale.

My home with attached office on Queen's Creek in Mathews County. Nine rooms with three baths. Boat dock and double garage. Office suitable for guest wing. Desirable location for dentist. Reasonable priced. Can be financed. Dr. H. L. Shinn, Hallieford, Virginia. Phone—Mathews 5-3441. (*Adv.*)

For Sale.

On the Eastern Shore, 10-room house and garage on lot 85 x 140 in town, office and waiting room included. House in excellent condition, steam heat, hardwood floors. Now occupied by physician who is leaving. Buyer steps into a $8,000-$10,000 practice. Priced $10,000 for quick sale. Occupancy about February 1st. Address #25, care the Virginia Medical Monthly, P. O. Box 5085, Richmond 20, Va. (*Adv.*)

Opportunity for EENT Surgeon.

Beautiful suite of office rooms, located in recently constructed doctors' office building. Offered for sale or rent by specialist retired because of poor health. Fully equipped. Adjacent to 49 bed hospital, association with 5 general practitioners and surgeons. Population of town 14,000. No other local specialist. Rooms also suitable for dentist. Phone 2-9851 or 4011, Elizabethton, Tennessee. (*Adv.*)

For Rent.

Doctor or dentist office. 2716 Grove Avenue, near Boulevard, Richmond. Will decorate. $100.00. H. T. Richeson & Company, 1007 East Main Street, Richmond. Phone 3-9111. (*Adv.*)

For Rent.

Excellent opportunity for physician just outside

Washington in expanding community of Alexandria. Complete 5-room house available for use as office in area needing services of a physician. Owners willing to assist doctor in getting started. Telephone Mr. Charles Gerstain, Temple 6-9378, Washington, D. C., for appointment. (*Adv.*)

OBITUARIES

Dr. William Leven Powell,

Prominent physician of Roanoke, died October 22nd, at the age of seventy-eight. He had been in failing health for several years but was active in practice until the day before he died. Dr. Powell was a native of Winchester and graduated in medicine from the University of Virginia in 1900. He had practiced in Roanoke for forty-eight years and was superintendent of the Roanoke Hospital (the present Memorial and Crippled Children's Hospital). Dr. Powell was several times chief of the staff at the hospital and was one of the organizers of the outpatient department. He was the first president of the Virginia Academy of General Practice and also served as president of the Roanoke Academy of Medicine. Dr. Powell had been a member of The Medical Society of Virginia since 1909 and was named its president in 1947. He had always been active in the work of the Society, having served on the Council and numerous committees. He was made a Life Member in 1950. Mrs. Powell and a son survive him.

Dr. Robley Dunglison Bates, Sr.,

Beloved physician of King and Queen County, died at his home in Newtown on October 22nd. He was seventy-nine years of age and a graduate of the Medical College of Virginia in 1906. Dr. Bates was prominent in the civic affairs of his county and a Mason. He served for many years on the Virginia State Board of Medical Examiners and was a president of the Mid-Tidewater Medical Society. Dr. Bates had been an active member of The Medical Society of Virginia for forty-eight years. He was named President of the Society in 1934. He is survived by his wife and a son, Dr. R. D. Bates, Jr., of Richmond.

Dr. George Hopkins Carr, Sr.,

Dean of Portsmouth physicians, died October 10th, after an illness of several weeks. He was seventy-nine years of age and a graduate in medicine of the University of Maryland in 1896. Dr. Carr had been a member of The Medical Society of Virginia for fifty-five years and was named a Life Member in 1948. His wife and three sons survive him. One son is Dr. G. H. Carr, Jr., of Portsmouth.

Dr. Joseph Gates Goode,

Well-known physician of Cheriton, died October 24th. He was seventy-eight years of age and graduated from the former University College of Medicine, Richmond, in 1899. Dr. Goode had practiced in Cape Charles since 1900 and had retired only a few weeks ago. He had been a Mason for more than fifty years and was active in the work of his local medical society. Dr. Goode has been a member of The Medical Society of Virginia since 1899 and was made a Life Member in 1949. A sister and three grandchildren survive him.

Dr. Homer Amos Spitler,

Mayor of Middleburg, died October 15th, at the age of seventy-five. He graduated from the former University College of Medicine, Richmond, in 1903. Dr. Spitler practiced in Middleburg for fifty years and had served as Mayor of the town since September 1953. He was active in the civic affairs of his county, a member of the board of directors of the Loudoun Hospital, and a member of the Loudoun County Medical Society. Dr. Spitler was a Life Member of The Medical Society of Virginia, having

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joined in 1903. His wife survives him.

The following resolutions were adopted by the Loudoun County Medical Society:

WHEREAS God Almighty in His wisdom has removed from our midst our friend and brother practitioner, Dr. Homer A. Spitler.

WHEREAS Dr. Spitler was a practitioner of medicine for many years in Loudoun County.

WHEREAS Dr. Spitler practiced medicine in Loudoun County at a time when the winters were rigorous, the roads were impassable, hospital facilities unavailable and consultations with specialists difficult and sometimes unobtainable.

WHEREAS Dr. Spitler, under the most trying conditions, exhibited an intelligence, a resourcefulness and a skill which reflected great credit upon him.

WHEREAS Among the many beautiful and inspiring attributes which Dr. Spitler possessed, his great humanitarianism, his reassuring calm, his placid confidence, his unalloyed kindness, his infinite tact, his unswerving geniality, his constant warmth, his personal attractiveness, and his extraordinary devotion to duty shone with a rare luminosity.

THEREFORE, BE IT RESOLVED that a copy of these resolutions be spread upon the minutes of the Loudoun County Medical Society, a copy be sent to each of the newspapers of the county, a copy be sent to The Medical Society of Virginia and a copy be sent to his bereaved wife for whom all of the members of this Society entertain the deepest, most heartfelt and sincere sympathy.

W. O. BAILEY

Dr. Louis Allen McAlpine,

Prominent surgeon of Portsmouth, died October 17th after a long illness. He was a native of Richmond and sixty years of age. Dr. McAlpine graduated from the Medical College of Virginia in 1916. He was active in bringing about the construction of the Maryview Hospital in Portsmouth and was head of the medical department until he retired because of ill health. An Editorial in the Portsmouth Star stated that "Portsmouth . . . has not only lost one of its able physicians and surgeons but a citizen who had faith in the community and did much for its building in the past quarter-century." His wife and two sons survive him.

Dr. George Andrew Wright,

Former superintendent of Southwestern State Hospital and founder of the Lee Memorial Hospital, Marion, died October 28th. He was seventy-three years of age and a graduate of the former University College of Medicine in 1904. Dr. Wright was superintendent of Southwestern State Hospital from 1926 to 1937 and founded the Lee Memorial Hospital in 1939. He had been a member of The Medical Society of Virginia since 1904 and would have received his certificate of Life Membership at the annual meeting in Washington on November 2nd. His wife and two sons survive him.

Resolution on Dr. Lehman

Dr. Edwin Partridge Lehman, retired Chairman of the Department of Surgery which he headed for over twenty-five years, died in Boston, May 27th, aged 65.

He was born in Germantown, Pa., June 9, 1888, was a graduate of Williams College, 1910, and received his medical degree from Harvard in 1914, being a John Harvard Fellow in his senior year. After interning at Peter Bent Brigham, he took three years of Postgraduate training at Barnes Hospital, St. Louis. Following two years of service during World War I as a First Lieutenant in the Army Medical Corps he joined the faculty of Washington University and rose from Instructor to Professor in six years. In 1928 he came to the University of Virginia as Professor of Surgery and Chairman of the Department, retiring in June, 1953 as Chairman, but serving as Consultant until his death.

Among the many honors Dr. Lehman received were the Major G. Seelig Lectureship at Washington University in 1949, and the William J. Mayo Lectureship at the University of Michigan in 1951. Very active in cancer work, he assumed the Directorship of the McIntire Clinic in 1936, was Director of the Virginia Cancer Foundation from 1940-44, and was President of the American Cancer Society in 1947-48, receiving the John Shelton Horsley Award for cancer education in Virginia in 1948. Other organizations in which he was active are the American Surgical Association of which he was Vice-President in 1946, and the Southern Surgical Association, President in 1948. A member of the Founders Group of the American Board of Surgery, he was also a member of the International Surgical Society, the American College of Surgeons, the American Association for the Surgery of Trauma, and an honorary member of the Society of University Surgeons. In the Southern Medical Association he was Chairman of the Section on Surgery in 1933, and Chairman of the Section on Medical Education in 1944.

Membership in honorary societies included Phi Beta Kappa, Alpha Omega Alpha and Sigma Xi.

Beloved by his students and interns and resident staff, Dr. Lehman was given a testimonial dinner in 1948, commemorating twenty years of teaching at the University, which was attended by former residents from all over the United States. His chief interest was in teaching, and he was never too busy to impart his vast fund of knowledge to those who asked. An avid reader of all worthwhile literature, not merely medical, he was a ready "source book" on the most recent developments in all medical fields. This was exemplified daily in his teaching and ward round groups where his active well-informed mind kept all of those present mentally alert.

Dr. Lehman during his long service left an indelible

imprint on the organization and teaching of Surgery in the Medical School. His scholarly untiring efforts to better all medical instruction will be sorely missed.

THEREFORE BE IT RESOLVED that the Albemarle County Medical Society expresses its sense of deep feeling and regret at the passing of this master teacher.

AND FURTHERMORE BE IT FURTHER RESOLVED that this resolution be spread upon the minutes of this Society, that copies be sent to his family and to the Virginia Medical Monthly.

WILLIAM P. PARSON, M.D.
FLETCHER D. WOODWARD ,M.D.
VINCENT W. ARCHER, M.D., *Chairman*

An Appreciation of Dr. Howell.

Dr. Paul Williamson Howell, a member of this Academy for 46 years, died July 26, 1954. He was blessed with a happy childhood, born and living on a prosperous and well run plantation in Sussex County, and his memory was filled with happy associations of that time. Later on he attended William and Mary College, where he received the Phi Beta Kappa Key and the glamour of those ideal days stayed with him through life. He graduated in medicine from the University College of Medicine in 1898 and went to work at Mt. Carbon, in the coal fields of West Virginia. He came back in 1900 to marry the lovely Adeline Green of this city; taking his bride back to the hills and, for the next eight years, continued practice in West Virginia. Richmond always called him, and he returned here in 1908 to live a long and happy life as a general practitioner of medicine. Many years ago he was appointed as assistant to the late Dr. W. S. Gordon, as medical attendant to the City Jail. He succeeded to the full position on Dr. Gordon's death and carried out the duties of this office with meticulous care.

Dr. Howell was conservative, in all the best this term implies. He attained to much special knowledge, but in the limits of general practice. Specialization always seemed to him an unnecessary sacrifice of his own concept of himself as a physician. For instance, his knowledge of surgery was such as to his becoming a member of the American College of Surgeons in Gynecology. At one time he became interested in cystoscopy and did considerable work in this field and did it well. In life insurance examinations he was an authority.

In organizations he seemed to be that type of man who was content to work back-stage. To illustrate, he held no post at William and Mary College, but he was an intimate of its presidents and knew and discussed with them all the plans for the tremendous growth of that institution.

It was in the realm of human relations that he excelled, with the urge to convert the most casual occasion into a gay celebration. In the out-of-doors he fished and golfed, but it was always more the companionship of the sport than the game itself, a smile on the face of a friend meaning far more than a low score.

As a host in his own home he was supreme. As a connoisseur of good living, there was literally nothing he could do for a guest in food or drink which did not receive his personal attention. His welcome was a heart warming thing and his farewells made one feel that in participating in his hospitality a great favor had been done him. No doctor had more of the clergy as patients and friends, and as a devout churchman he went to his end with a peculiar fortitude.

A devoted husband and father, the consuming desire of his last days was to protect those whom he loved from that which he knew to be inevitable, and by manner and speech, he suppressed that which he bodily endured.

God rest, a very splendid gentleman.

ELAM C. TOOME
A. STEPHENS GRAHAM
THOMAS W. MURRELL

Dr. Delarue.

The Richmond Academy of Medicine records with sorrow the death of Edward A. Delarue, junior, on 19 September, 1954, in Richmond, who suffered thrombosis of a coronary artery while examing a patient in a local hospital. Dr. Delarue was 47 years of age and a native of Richmond. After graduation from McGuire's University School, he attended the University of Virginia, receiving first an academic degree, and subsequently a doctorate in medicine in 1933. While at the University he was elected to membership in the Raven Society (scholastic honor society), Phi Beta Kappa, and Alpha Omega Alpha Societies. He also enjoyed athletics, running the distance races on the track team.

Dr. Delarue's post-graduate training was extensive, beginning with an internship at the Peter Bent Brigham Hospital in Boston and being continued at the Willard Parker and King's County Hospitals in New York. He then traveled in Europe, visiting clinics and medical schools. After his return to Richmond he opened his office for the practice of internal medicine, and joined the staff of the Medical College of Virginia working in the department of medicine.

Dr. Delarue was a diplomate of the American Board of Internal Medicine with a certificate in the sub-specialty of cardiology. He was a member of his state medical society, the American Medical Association, and a Fellow of the American College of Physicians.

In World War II Dr. Delarue was commissioned Captain in the Army Medical Corps and was a member of the 45th General Hospital when activated at Camp Lee in May 1942. The Staff of Officers of general hospitals at this time was reduced by the Surgeon General, and so several officers were detached to other units. Captain, later promoted to Major, Delarue subsequently served four years in the 220th Station Hospital. Following his separation from the Army he became a member of the attending staff at McGuire (Veterans Administration) General Hospital, and resumed his practice of internal medicine and his association with the Medical College of Virginia.

A measure of his intellectual level is provided by the scholastic honors which he won at the University of Vir-

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ginia. The depth and broadness of his learning are evident by his desire to undergo not one but all of the examinations in the sub-specialty groups offered by the American Board of Internal Medicine. However, to his disappointment, he was permitted to take only one sub-specialty examination and selected cardiology as his chief interest. In his practice his work was characterized by meticulousness of extreme degree, his clinical notes were precise and complete, and his observations logical and clearly expressed. His skepticism of all new (and unproven) theories and fads in medicine was admirable and a healthy counterbalance to the reckless and uncritical enthusiasm of many of our present day medical writers.

Throughout the years of his practice he continued to be a student and devoted hours daily to systematic study of medical literature. However, his intellectuality was coupled with a strong sense of rectitude complementing a rare devotion to his family and patients.

Dr. Delarue is survived by his parents and a sister. The Richmond Academy of Medicine shares with them its loss and extends to them its heartfelt sympathy.

JAMES O. BURKE
BEVERLEY B. CLARY
M. M. PINCKNEY

Resolution on Dr. Tabb.

John Lloyd Tabb was born in Baltimore, Maryland, of Gloucester County, Virginia, parentage November 17th, 1892. He was one of three children of John Lloyd Tabb, a lumber and hardware merchant, and his wife, Susan Selden Tabb . . . . . .

Dr. Tabb attended McGuire's University School and later Woodberry Forest School. He entered the Medical College of Virginia in 1912 and graduated in the class of 1916. His colleagues refer to him as an outstanding student, careful and exacting in his understanding and application of medical facts. This attitude he continued to manifest in his distinguished career as a radiologist.

Following graduation he practiced two years at Midlothian, Virginia with another distinguished alumnus of the Medical College of Virginia, Dr. J. B. Fisher. This training in general practice was to give him a clinical perspective in radiology so valuable to any specialist.

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In 1918 he enlisted in the United States Army and was assigned as First Lieutenant to Mobile Hospital Number I in France during World War I. He became attached to the radiology department and learned to dictate x-ray reports above the din of the gasoline powered electric generator in the field hospital. This characteristic impressive expostulation gave an authority to his speech which all respected. This was but one evidence of his summoning all of his powers to make a decision on an x-ray film. No matter how routine it might seem to others, each film was an exercise in precision of interpretation, a concentration of all his vast experience on a tiny segment of bone or the fascinating coil of a gastro-intestinal series.

Because of his broadened and seasoned war experiences as a radiologist he was invited to join Dr. Alfred Gray at the close of the war. This association with Dr. Gray, who was the first full time radiologist at the Medical College and radiologist at St. Luke's Hospital, continued until Dr. Gray's death in 1932, when Dr. Tabb became chief radiologist at St. Luke's as well as conducting a large practice in the Medical Arts Building. In addition Dr. Tabb did radiology for Crippled Childrens Hospital and Pine Camp, Westbrook Sanatorium and in the offices of the Drs. Blanton.

On July 1st, 1952 he closed his private offices and moved to McGuire Clinic and St. Luke's Hospital where he became a partner and director respectively and worked there right up to within twenty-four hours of his death from coronary thrombosis September 1st, 1954.

In 1927 he married Miss Emily Chaffin Crockett, a St. Luke's nurse, who survives him. He is also survived by two sons. . . . . .

Dr. Tabb was not a joiner nor did he seek public or even professional acclaim. He was satisfied by the esteem of his colleagues and in the service he could render them and their patients. That he was exceptionally competent in his field no one doubted. His signature on an x-ray report meant that the best interpretation of human eyes had been given.

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He was past president of the Virginia Radiological Society, and was radiologist for the Seaboard Airline Railway Company. He was associate professor of Radiology at the Medical College of Virginia.

Dr. Tabb was a communicant of St. James Episcopal Church.

He was proud of his family and his hobbies were within his home where he maintained a fine wood-work shop. His summer home in Gloucester was his recreation.

Dr. Tabb was a radiologic diagnostician with few peers. His respect for the roentgen ray for therapy was profound, and he never ceased to wonder how much harm it did to healthy tissues while he was treating the diseased. He was meticulous in his work and would not be hurried into short cuts, no matter how others tried to persuade him. His colleagues learned to find that in his field his judgment was unsurpassed. They will miss him for his terse accurate reports and his sympathetic understanding of clinical problems.

He had a sympathy for the needy and distressed. He never spoke ill of any one. He was loyal to his friends.

THEREFORE, BE IT RESOLVED that Virginia and Richmond have lost a distinguished radiologist and that the Academy of Medicine express its sympathy to his bereaved family and friends; that a copy of these resolutions be sent to his family, a copy spread on the minutes of the Richmond Academy of Medicine, and a copy sent to the Virginia Medical Monthly for publication.

E. LATANE FLANAGAN
STUART J. EISENBERG
JOHN P. LYNCH, *Chairman*

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